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AUTHOR	Jackson, Nancy
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ABSTRACT

This publication is part of the study materials for the distance education course, Adults Learning: The Changing Workplace B, in the Open Campus Program at Deakin University. Section 1 looks mostly at male-dominated trades work and at some historical modes of the flexing of political muscle in struggles over the definition of work and skill. It examines ideas about the male body as an integral part of skill, the way bodies are related to machine and work design and how 'difference' becomes 'male advantage' at work. Section 2 looks primarily at female-dominated work in the public service and also at contemporary bureaucratic modes of 'flexing political muscle' through highly rationalized methods of defining work and skill. It examines the lessons of a major pay equity project that failed, and shows how women's skills are systematically understated by the gendered nature of hierarchical work organization. The third section looks briefly at how training becomes the battleground for many of these conflicting interests in the design of working life. Contains 29 references at the end of these three sections. The following papers constitute approximately 70% of the document: "The Talents of Women, the Skills of Men: Flexible Specialisation and Women" (J. Jenson); "Hierarchies, Jobs, Bodies: A Theory of Gendered Organisations" (J. Acker); "Technology and the Redesign of Work in the Insurance Industry" (E. Appelbaum); and "New Technology, Training and Union Strategies" (H. Rainbird). Concluding the document is a 10-item annotated bibliography. (MN)

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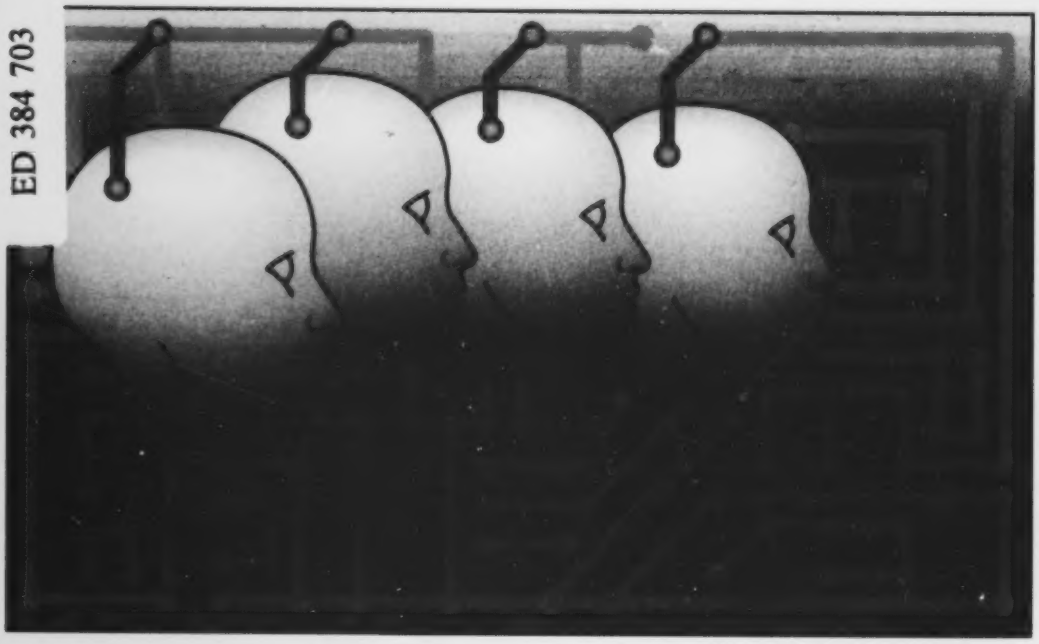

SKILLS FORMATION AND GENDER RELATIONS: THE POLITICS OF WHO KNOWS WHAT

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NANCY JACKSON

EEE701 ADULTS LEARNING: THE CHANGING WORKPLACE B

SKILLS FORMATION AND GENDER RELATIONS: THE POLITICS OF WHO KNOWS WHAT

NANCY JACKSON

Deakin
University

This book has been produced as part of the study materials for EEE701 *Adults learning: The changing workplace B*, which is one of the units offered by the Faculty of Education in Deakin University's Open Campus Program. It has been prepared for the unit team, whose members are:

Richard Bates
Jill Blackmore
Mike Brown (chair)
Robin McTaggart
Helen Modra
Frances Patrick (developer)
John Smyth
Peter Watkins
Steve Wright

Consultants

Elaine Bernard
Harvard University
Chris Bigum
Deakin University
David Boud
University of New South Wales
Sue Collard
University of British Columbia
Nancy Jackson
McGill University
David Little
University of Regina
Craig R. Littler
University College of Southern Queensland
Jean McAllister
University of Regina
Robert Priebe
University of Regina
Karen Watkins
University of Texas
David Walker
Education Centre, Sydney
Michael Welton
Dalhousie University

The study materials include:
P. Watkins, *Knowledge and Control in the Flexible Workplace*
C.R. Littler, *Technology and the Organisation of Work*
M. Welton, *Toward Development Work: The Workplace as a Learning Environment*
N. Jackson, *Skills Formation and Gender Relations: The Politics of Who Knows What*

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SERIES INTRODUCTION

The nature and purpose of education in the workplace has been the subject of much debate in Australia in recent years. While the vagaries of local and international competition have led many firms to reconsider the role of their workforce and the training requirements this entails, governments have been equally keen to adapt existing education systems to the perceived needs of industry. Leading union bodies have been distinguished in this debate by their pro-active role, outlining the path by which a reconstructed industrial climate can win the nation a new place in the world economy.

The series of monographs of which this volume is a part explores the approaches to learning currently modeled within industry. In the process the question inevitably arises as to whether existing orientations and practices are in the best interests of the various stakeholders in the workplace.

The arguments developed in these monographs address themselves to a range of contemporary issues in industrial education. To date, prevailing approaches have rested upon narrow, instrumentalist notions of learning; in their different ways, the writers have set out to challenge this orthodoxy. In doing so, they highlight the silences—on questions of gender, class or ethnicity—that underpin the behavourist outlook still dominant in the world of training.

In preparing this series of monographs, the course team has sought to address issues that are of fundamental concern to those involved in the complex and demanding field of workplace learning. It is hoped that, in its own modest way, the pedagogy we have developed can serve to exemplify a different notion of what industrial education might become.

SKILLS FORMATION AND GENDER RELATIONS: THE POLITICS OF WHO KNOWS WHAT

Introduction

> Strictly speaking, there is no such thing as a purely technical division of labour ... all technical division is at the same time a social division. (Hussain 1976, p. 419)

The last decade has brought a tremendous upsurge in the political as well as economic significance of skill throughout the industrialised world. 'Skill' has become a buzzword of public policy, a metaphor for everything worth knowing and the password to prosperity in the global economy. 'Skills development' and 'skills training' have become the mainstays of labour market policy and human resource management, and the panacea held out to every youth in search of a future.

This explosion of interest in skill is part of the wave of restructuring sweeping through the world economic order. New technologies, production processes and management methods are transforming the social and economic relations of work on a global as well as a local scale. Individuals face new and constantly changing conditions in the organisation of work, jobs and skills. These changes transform the social fabric of both workplaces and communities, as decisions about how people will work also shape how they will live (Kessler-Harris 1990). The stakes are high for individuals as well as for corporations and nation states.

This monograph approaches the concept of skill from a social rather than a technical perspective and explores its workplace significance in this light. In so doing, the commonsense quality of the concept of skill quickly begins to fade. It ceases to appear as a tangible entity, a capacity for work that is possessed by some people and not others and learned by training. Rather, we see that the concept of skill involves a complex interplay of technical and social forces. 'Skill' is a concept that serves to differentiate between different kinds of work and workers and to organise the relations among them. It has been used for many years to protect the interests of those who have power, and so has come to express the interweaving of the technical organisation of work with hierarchies of power and privilege between men and women, whites and nonwhites, old and young. Thus, skill designations are deeply implicated in the struggle not only for bread and butter, but for 'bread and roses', too (see Eisenstein 1983).

What's gender got to do with it?

> Gender is not just a fancy word for 'women' but a fundamental social structure ... (Maroney & Luxton 1987, p. 11)

Studies of skill formation began in earnest following the 1974 publication of Harry Braverman's innovative study *Labou and Monopoly Capitali* This work set the agenda for over a decade of research by challenging the basis of skills categories and questioning whose interests they served. The outpouring of research and writings that followed came to be known as 'the labour process debates' (see Thompson 1983; Knights & Willmott 1990). Over the years, this tradition of research has been roundly criticised for 'male bias'—that is, being written by men, for men, about men, indeed about mostly highly paid white men, and generalising from there to an over-all theory of 'labour process'. Partly in response to these criticisms, sociologists and social historians of work, feminists among them, have increasingly broadened the focus of studies of work and working relations to include the complex interaction between many different groups of workers within workplaces of all sizes and kinds (industrial, commercial, service, domestic etc.). These studies have opened new horizons in understanding the social dynamics of work and the social relations of skill, including how work itself is shaped by the relations between men and women. What is emerging from this research is an understanding of gender relations as a fundamental organising device running throughout the fabric of working life, shaping and being shaped by the experience of men as well as women.

This monograph explores the presence of gender in working relations by focusing on the politics of skill definition in both industrial and white-collar settings. Section 1 looks mostly at male-dominated trades work and at some historical modes of the flexing of political muscle in struggles over the definition of work and skill. It examines ideas about the male body as an integral part of skill, the way bodies are related to machine and work design and how 'difference' becomes 'male advantage' at work. Section 2 looks primarily at female-dominated work in the public service and also at contemporary bureaucratic modes of 'flexing political muscle' through highly rationalised methods of defining work and skill. It examines the lessons of a major pay equity project that failed, and shows how women's skills are systematically understated by the gendered nature of hierarchical work organisation. Finally, Section 3 looks briefly at how training becomes the battleground for many of these conflicting interests in the design of working life.

SECTION 1

THE POLITICS OF DEFINITION

Throughout the history of industrialism, the organisation and designation of 'skill' in work has been an arena of recurring conflict. As employers sought to introduce labour-saving technology and/or to hire cheaper workers, the skill status, wage levels and job security of different groups of workers have been the subject of open struggle. Faced with these crises, unionised workers, the most powerful and well organised of whom have been white males, have repeatedly rallied to protect their interests by barricading their jobs, not only against the encroachment of machines, but against the inroads of other workers who stood to gain from their loss. Thus, conflict between workers and management over skill has been inseparable from the struggle amongst workers themselves. Relations of gender and race are part of, not separate from, this history (see Westwood & Bhachu 1988).

Recent research examines these dynamics across the centuries and continents of capitalist work organisation (see Afshar 1985). It shows that such disputes have focused not only on the possession and distribution of skills, such as control over apprenticeships, but on the character of work and the definition of skill. Employers have had an interest in disrupting established notions of skill in order to loosen the trade union grasp on the production process. Unions have responded by learning to redefine the nature of their work and skills as necessary to fit whatever or whoever was the current threat. In other words, the act of 'definition' has been a weapon on both sides of the struggle. This kind of manipulation has been called 'socio-political power play' (Cockburn 1986, p. 106).

Tales of 'power-play' through skill definition are clearly and entertainingly recounted in recent studies of the London printing trades by Cynthia Cockburn (1983; 1985; 1986). She examines how 'hot metal compositors' have successfully defended their trade through several rounds of technological innovation and repeated attempts to substitute less-skilled men and women. The compositors were successful in defending their status, even though successive changes in the industry have eliminated many of the work criteria which have defined it as a skilled craft and a male

preserve (Cockburn 1986). Part of their success was achieved by redefining their skill in terms of whatever their current opponent was lacking. So, Cockburn tells us:

> against the unskilled male, defined as corporally superior to the skilled, hot metal comps have defended their craft in terms of (a) its intellectual and (b) its dexterity requirements. Against women, with their supposed superior dexterity, the skilled men on the contrary used to invoke (a) the heavy bodily demands of the work and (b) the intellectual standards it was supposed to require. (Cockburn 1986, p. 106)

The politics of definition displayed here include what Cockburn calls 'overstat[ing] the tangible factors in skill ... for the purposes of self defence' (1986, p. 106). We will see that the tactic of 'overstating' the truth is not unique to the compositors. It is a standard maneuvre in the history of 'socio-political power play' (1986, p.106). It works just as well in reverse, as I will show in a discussion of 'understating' of skills in Section 2.

With the advance of industrialisation and the destruction of many familiar forms of skill associated with trades work, the blend of 'political' and 'tangible' factors in skill designations has continually shifted. Some argue that skill labels have come to be largely emptied of their tangible content and imposed on certain types of work by virtue of the sex and power of the workers who perform them (Phillips & Taylor 1986). In this context, it is said that skill has mostly been 'defined against' women, as the part of the work that women 'don't do' (Phillips & Taylor 1986, pp. 61–3). Similar claims are beginning to be made about the hierarchy of racial and ethnic relations in many workplaces (see Westwood & Bhachu 1988).

The political nakedness of such distinctions can be seen in the case of the men and women who did machining in the clothing industries in Britain in the 1920s (Phillips & Taylor 1986). The women were employed in large workshops in a more subdivided labour process machining men's garments, and men worked in smaller shops machining women's garments. Through several reorganisations of the industry, including the introduction of a law calling for a single basis for skill classification in the two sectors, the men's work continued to be rated as skilled and the women's as semiskilled. Similarly, in the printing and publishing industry, the work of typists using a word processor is rated as 'unskilled' and that of compositors using the new computerised photocomposition process is seen as 'skilled' (Cockburn 1983; Baron 1987). In both cases, the difference is not in the actual labour they perform, but in how the work is situated in a labour process and the history of the sociopolitical organisation around it.

A move by Australian retailers in the 1920s shows the attempt to create such politically motivated distinctions in work definitions among

shop assistants in the rapidly expanding workforce of chain or variety stores (Game & Pringle 1983). In response to uniform wage rate awards, some merchants attempted to define female shop assistants as 'wrappers' or 'packers' in order to avoid paying the uniform wage. They were defeated by the union in court, but their strategy illustrates how the definition of work itself can become a tool in the political process.

These stories suggest that the definition of 'work' and 'skill' depends in part on who has the power to define, as well as on the circumstances a definition is meant to fit and the interests it is meant to serve. The work of crafting a definition and making it stick are part of the political process, and an important means by which power is secured and defended. Thus the significance of skill as a presence in the workplace depends not just on its 'tangible' or technical form as an attribute of individual performance, but also on how those attributes are part of a social process. This point will be central to the argument throughout this monograph.

The politics of the body

> Physical difference ... does not necessarily matter, but it can be made to matter. (Cockburn 1986, p. 106)

The popular mental model of skill is heavily shaped by rather romantic notions of the splendor of the male craft tradition. In this mode, skill is seen to consist of direct physical intimacy with hand tools, raw materials and production processes, acquired over years of exposure to routine and nonroutine situations. All of this is combined with physical strength and stamina in such a way that skill is seen to be expressed directly through the use of one's body. This image of skill is overwhelmingly associated with ideas about male work and male bodies.

A lot of the historical differentiation between men and women in relation to skill has been made on the basis of claims about male and female bodies. Women are seen to lack the physical capacity for most kinds of skill conceived as resident in, or an extension of, the body. This difference has been used to justify as 'natural' the exclusion of women from many kinds of work. By the same token, the bodily capacities commonly identified with women (e.g. manual dexterity) are associated with work that is defined as unskilled (see Phillips & Taylor 1986).

Recently, however, there is a growing awareness that the relevance of the body to work is just as determined by sociopolitical forces as other 'factors' of skill. Grasping this idea involves two steps: the first means thinking about how the body itself is a social product; the second requires

exploring how social choices shape the relations between the body and work. I will deal with the each point separately.

Maleness as 'life history'

Physical differences between the average man and the average woman in any culture are there for all to see. But so is a wide range of physical differences within the population of women or the population of men. Thus, differences in body type do not correspond consistently or exclusively to gender. Furthermore, none of these bodily differences are simply given at birth. Women who are trained to use their bodies, whether as athletes or as farmers, develop strength and coordination, just as men who are not so trained, do not (Connell 1987; Cockburn 1983). So bodies, too, are a social product, shaped over time according to how we use them. Even the bodily characteristics and mannerisms associated specifically with gender are not simply 'natural' occurances. Again, many of them are a product of the way men and women have been taught to 'live' in their bodies differently:

> Boys are conditioned from childhood in numberless ways to be more physically effective than girls. They are trained in activities that develop muscle, they are taught to place their weight firmly on both feet, to move freely, to use their bodies with authority (Cockburn 1986, p. 97)

A sense of this male bodily experience is provided by Connell (1987) who writes:

> The physical sense of maleness is not a simple thing. It involves size and shape, habits of posture and movement, particular physical skills and the lack of others, the image of one's own body, the way it is presented to other people and the ways they respond to it, the way it operates at work and in sexual relations. (Connell 1987, p. 84)

Connell puts 'work and sexual relations' side by side as part of the physical experience of gender, arguing that the sense of maleness arises in both domains not as a matter of biology, but as a 'personal history of social practice' (1987, p.84). Continuing, he writes:

> In no sense is all this [the physical sense of maleness] a consequence of XY chromosomes, or even of the possession on which discussions of masculinity have so lovingly dwelt, the penis. The physical sense of maleness grows through a personal history of social practice, a life-history-in-society. (Connell 1987, p. 84)

Of course the 'history' to which Connell refers is not only an individual history, although it is certainly that as well. Importantly, it is a social and cultural history, one that produces the sense of what different social groups hold in common about what it means to be a man or woman.

This social 'image' of maleness and femaleness is an important dimension of workplace relations. It shapes not only interpersonal relations, but organisational decision-making . Its power to shape decisions depends not on its actual correspondence with particular individuals, but on its dominance as an image to which men and women consent, and sometimes actively strive (Connell 1987). The use of these images to organise our relations at work is part of the process of 'consent'. In the culture of the workplace, it is this 'hegemonic' male (Connell 1987), rather than any particular male, who is the archetypal skilled worker, and the 'hegemonic' female who is not (see Pringle 1988).

From difference to advantage

The existence of physical differences or of different 'dominant images' between males and females does not alone account for the disparity in power and status between them at work. According to Cockburn, the dynamic that 'matters' is the process of translating 'difference' into 'advantage'. That translation begins with the definition of tasks and the design of tools and machinery in ways that privilege the physical presence of men. Cockburn writes:

> Men, having been reared to a bodily advantage, are able to make political and economic use of it by defining into their occupation certain tasks that require the muscle they alone possess, thereby barricading it against women who might be used against them as low-cost alternative workers. (Cockburn 1986, p. 106)

The work of compositors illustrates this point. For years, the job involved the lifting and carrying of 'formes', which were the large surfaces of assembled type weighing about twenty kilos, moved by the compositor to the proofing press and back. This physically demanding portion of the compositors' job was central to the view that the job was unsuitable for women. However, Cockburn points out that this particular organisation of printing work was dictated not by any technical necessity, but strictly by custom. The formes could have been smaller, as could any of the other machinery including the presses themselves. Furthermore, the existing technology of hoists and trolleys could have been used to transport formes of any size and weight at any time, but was not. It also came to light that

many of the men also found the formes difficult to lift and carry, and that this task was considered to be 'beyond the strength' of the older compositors. There had long been occasional talk of hiring unskilled male assistants to do this aspect of the work, but the men hesitated for fear it would be used to loosen their grip on the craft (see Cockburn 1986, p. 106).

Meanwhile, in a few small printshops organised by 'philanthropic feminists', women were daily proving themselves physically capable, 'given training and practice' of typesetting and printing. They solved the problem of heavy lifting and carrying in the same way proposed by the men, by hiring unskilled male assistants. The men, however, dismissed these shops as the 'wild schemes of social reformers and cranks' (Cockburn 1986, p. 100).

The message is that physical difference 'doesn't necessarily matter, but it can be made to matter' (Cockburn 1986, p. 106). It is made to matter through simple and ubiquitous design choices, made by men, in ways that privilege the situation of men. Thus, as Cockburn says succinctly, 'units of work (hay bales, cement sacks) are political in their design' (1986, p. 106) (see also Winner 1980). The manipulation of such choices is the key to 'socio-political power play' in work.

Just as the requirement for size and strength can be 'designed in' to machines, so can the requirement for particular skills over which one group has control. Still looking at the printing industry, a lingering battle over keyboard design illustrates the point. Cockburn reports that for about seventy years, union compositors defended their trade against the threat of cheap female labour by lobbying not only to exclude women but to exclude the use of typesetting machines which used the standard typewriter 'QWERTY' keyboard instead of the '90 key lay' with which the male union compositors were familiar. But with the new generation of electronic composing systems, most leading manufacturers have switched to the typewriter keyboard, 'with an eye to the hundreds of thousands of low-paid female typists their clients may profit from installing at the new keyboards' (1986, p. 108). By this single design choice, Cockburn points out thousands of male, unionised operators of the old 'Lino' keypad were reduced 'at a single blow to fumbling incompetence' (1986, p. 108).

Thus, neither bodily capacity nor technical training can alone account for power differentials at work. The relevance of those qualities depends upon how they relate to the organisation of work, and that is always a social choice. So the notion of 'skill' itself begins to look less straightforward. It is not an object or an entity that some folks have and others do not but rather a relation between people and things. It is an idea that we use to differentiate between different kinds of work and workers in different times and places. Its power lies not simply in the technical capacities that it claims to stand for, but in the way we use it to organise our lives.

Skill and social relations

There is a complex interplay of physical, technical and social forces at work in the constitution of skilled work and workers. The more deeply we scratch the surface, the more difficult it is to find a line where one begins and the other ends: it is a seamless fabric. Indeed, this seamless quality is precisely the way that power struggles at work are experienced in the ordinary routines of everyday life. The coherence of all these forces is captured in the following quote from a woman worker in the steel mills of Australia:

> They put me on one job for six weeks cutting steel. You had to pull a grid out. It was a real struggle every time. After six weeks, when they told me the knack, with a twist and a flick of the wrist, it was easy, but they only showed me after they decided that, 'Yeah, she can do it.' There was always a knack. (Schultz 1985, p. 170)

This lone woman on the floor of the steel mill shows us the daily intersection of skill, work and gender. She gives us a glimpse of the relevance for skill of what Connell called a 'personal history of social practice' (Connell 1987, p. 84). For the men, being a man and learning the 'knack of it' are part of the same social process—being one of the 'mates'. The work process was designed for the mates and depends for its successful operation on interaction among them. For a woman (and probably for a minority group man), all that is disorganised. By virtue of living her life as a woman, she is not one of the mates, nor can she be. Yet it is through the interaction of 'being' one of them that the 'knacks' and the 'tricks of the trade' are learned. The 'knack' is part of the skill of the work and central to how the power of the workers is protected; it is part of the de facto job structure and, by extension, part of the organisation of the workplace and the career structure in the steel industry. Thus, the technical aspects of the work are inseparable from the form they take as a lived social process (Manwaring & Wood 1984). The relations of gender are part of how it is lived, for the mates as surely as for the women.

However, this view of social life on the job is only part of the story of how skill is a social process. Skill is 'social', not only because it is lived as a process of interaction, through conflict and/or cooperation. It is also 'social' in the larger and more abstract sense, in that it is defined and organised as the product of collective or concerted actions of whole groups of people, in ways that then give shape to individual understanding and experience. To a large extent, work itself is organised in this larger arena of social action. Jobs are defined and skill status assigned before individuals walk on to the job site. How this gets done and how gender plays a part are the focus of

investigation in Section 2. The emphasis will also shift from the forms of political 'power-play' that protect the privilege of males, to those that systematically undermine the skill, status and power of women workers.

SECTION 2

THE POLITICS OF 'UNDERSKILLING'

> It is not simply error that keeps skill unseen. (Acker 1989, p. 212)

A classic story from the food processing industry in Britain tells of a company which, in the course of technological upgrading, dismissed a lot of semi- and unskilled women workers, only to find when they reopened their upgraded plant, they eventually had to recall these 'unskilled' workers to train the new employees:

> ... in their haste to let people go they lost skills which were essential to production These skills, though not formally recognized, had been acquired through experience and were based on knowledge of the system, the product and an ability to identify faults in the functioning of production lines. ... These skills are tacit ... (Rainbird 1988, p. 179)

This story identifies a dynamic which is becoming more and more widely acknowledged, that many so-called 'unskilled' workers have de facto knowledge and skill without which they could not do their jobs. Thus, the relevant question to ask is not which workers have skills, but which skills get selected for recognition and reward and which do not (Rainbird 1988).

This section looks at how the character of work and skill in female-dominated occupations is systematically obscured and understated by routine bureaucratic mechanisms for job definition. Once again, the issue is how the 'politics of definition' are played. In some respects, the women whose jobs are examined here would rank quite high on a scale of privilege, since they are predominantly white and educated and all are unionised. But they are subject to systematic processes of 'underskilling' through which their work and skills are disorganised, made invisible on the job and appropriated for the benefit of other workers. As we will see, these mechanisms are deeply embedded in the design of work.

Bureaucracy and 'invisibility'

Recent experience with equal-pay initiatives on several continents is bringing to light new understandings of how gender relations at work are tied to the organisation of work and skill. An excellent discussion is found in a recent study of a 'comparable worth' project in the public service of the state of Oregon (Acker 1989). This initiative was aimed at equalising wage rates for men and women doing work that was different but of equal value in different parts of government employment. Adjustment in wage assignments was sought through the use of standard job evaluation techniques in which the fight for skill recognition and wage parity are fused into one. The project was led by a task force consisting of feminists within the public service, along with representatives of the government employees union and the employer. It took place over a five-year period in the mid-1980s, during which time it ran into repeated political difficulties and eventually was jettisoned without achieving the major objectives of any of the participants.

The simplest and most predictable mechanism of inequity in skills recognition encountered in the course of the project was the knowledge and understanding of the participants themselves. Controversy arose between women and men on the job evaluation team over the rating of 'blue' and 'pink' collar jobs. Most of the women were already conditioned to think of male blue-collar jobs as involving various levels of skill. By contrast, male blue-collar workers on the team just 'could not believe' that traditional women's jobs in hospitals, schools and offices could involve the levels of problem solving and 'troubleshooting' that they associated with 'skilled work'. Care giving and emotional problem-solving skills were routinely slighted in this way, whether they were situated in hospitals, schools or offices. Similarly, in clerical and service jobs, the male evaluators could not see the skill content in activities like 'composing letters and other documents, dealing with requests for information, resolving conflicts between workers, and arranging meetings' (Acker 1989, p. 214). They saw these as things that could be done by 'anybody who has been to school' (Acker 1989, p. 214), and resisted examining what that commonsense notion might cover up. So decisions of the evaluation team itself frequently reproduced the forms of cultural and political bias that they had set out to eliminate.

The next level of conflict was over what otherwise appeared to be minor administrative details in the conduct of the job evaluation process, but which under pressure turned out to hold in place critical aspects of the relations of power and privilege in the workplace, including those between men and women. These dynamics are illustrated in the dispute over a

proposal to expand the range of point scores available in the job evaluation instrument for rating 'human relations' as a job component. The purpose for such a change was to allow the possibility for greater recognition of the human relations aspects of many low-level jobs, the vast majority of which were occupied by women. According to Acker, resistance to this proposal came from the management consultants who were concerned that increasing the potential point scores in these low-level jobs would amount to a 'distortion' of a 'reasonable' and 'rational' hierarchical structure. In particular, it would lead to 'compression' of the hierarchy and 'relative undervaluing' of managerial jobs, thus making them 'less competitive' on the job market (Acker 1989, p. 209). These familiar concerns are referred to within personnel management as problems of 'internal' and 'external' equity. When the task force overruled their objections (on the grounds of giving priority to 'gender equity') and expanded the point range on the evaluation instrument, the management consultants devised a set of instructions for the application of the scale which guaranteed that the expanded points would rarely be used. The operation of the 'objective point rating' system itself thus became a vehicle for producing the invisibility of salient features of women's work and skill. This was one of many moments throughout the project that demonstrated, as Acker stresses, that 'the technical is political'.

Even with its remaining sources of 'bias', the evaluation process found ten thousand jobs that were undervalued relative to the new assessment of skill levels (Acker 1989). This set the stage for the next level of difficulty, which was inability to get agreement on a mechanism for wage adjustment. In this case, conflict focused on opposition between management and the union, not over the principle of revaluation on the face of it, but over the implications of the technical changes that would be required to do so. The remedial measures proposed included a one-time intervention in collective bargaining and temporary red-lining of highly paid positions. Some of the unions balked at these measures on the grounds that they would undermine the integrity of the collective bargaining process and thus the structural integrity of the union, and that they would compromise the basic union principle of wage protection for its members.

In this situation, Acker points out, the 'structure' and 'principles' that the unions wanted to protect were the very ones that provided high wages for men and low wages for women. The form of 'wage protection' which union leaders took to represent the 'interests of the members' in fact served only the men. Meanwhile, other 'union principles', like the fight for fair wages, which would have served the interests of the women, appeared as 'only gender' issues (Acker 1989, p. 217). Thus an inequitable gender order was part of the basic 'structural integrity' of the union, exactly as it was for the employer.

In these examples, the denial of skill components (and eventually denial of wages) in female-dominated jobs turned out not to be a product of simple oversight or error of judgment, but rather a systematic property of 'rational hierarchy' and a basic feature of the authority structure of work. This form of 'invisibility' of women's work and skill was not seen as a failure in the rational conduct of organisational life, but as an integral feature of its normal and 'reasonable' operation (Reimer 1987; Acker 1989; Cassin 1990). It places the problem of gender inequity not at the periphery of workplace political relations, but in its very centre.

Controlling 'what is true' about clerical skills

Wherever work is bureaucratically defined, whether in factory or office settings, the politics of the workplace converge around what Acker calls the struggle for 'control over the definition of what is true' (1989, p. 312). Documents are central to this dynamic. Where struggle is over definitions of work and skill, the documents of personnel management are key. They provide an authorised version of the work process in every position, laying out the scope of authority to act, the duties and responsibility and the reporting relations of the position so it can be held accountable to the goals of the organisation. The same parameters used to define a position in this way are used to assign wage levels to it, and to hire a qualified person. Thus the documents serve as a schema for coordinating a single 'truth' about a position—what kind of work gets done, what kinds of skills and knowledge are required, and what the work is 'worth' in organisational terms (Cassin 1990).

In a fascinating study of advanced level clerical workers in the public service in Ontario, Canada, Reimer (1987) has shown the power of these arrangements to constitute clerical work as 'low-level, non-specialised labour' and to appropriate a vast array of skills and knowledge routinely used by these workers. Reimer studies the relation between advanced clerical duties like information gathering, responding to inquiries, preparing an agenda for a meeting etc. and the 'policy work' to which these clerical duties are attached. While the clerical workers themselves held the view that they 'didn't do' policy work, this distinction came to appear as highly political. Reimer found the explanation for this situation in the personnel documents.

The personnel documents that organise clerical positions objectify the work as low level in a series of simple, if obscure, steps. First, they represent the activities to be undertaken as 'routine' and 'procedural', thus limiting the scope of knowledge which can be said to be required. Next, they tightly

restrict the scope within which a clerical worker is authorised to act, thus limiting the responsibility that she can be said to hold. Any functions which she performs that go beyond these limits will appear in the job description as tasks delegated and supervised by a superior. In this way, the products of her work become the 'action' of the superior for organisational purposes (see Reimer 1987, pp. 57–67).

According to Reimer, the clerical job descriptors like 'open the mail' or 'respond to inquiries' used in these documents are not meant to describe the actual daily activities of these workers. Rather, they serve as a 'control language' which ensures the low level of responsibility of these workers in the authority structure of the workplace. She writes:

> Rather than specifying the material work process or responsibilities routinely undertaken in a position, this language identifies a set of authority relations governing the authorship of action within the managerial process. (Reimer 1987, p. 66)

This control function of bureaucratic language is at the heart of the problem that Acker calls the 'invisibility' of women's skills. But Reimer shows us that the problem goes farther than that. Rather than serving to 'recognise and defend' the skills of clerical work, the documentary language of clerical positions systematically appropriates them for the benefit of more senior workers. Clerical 'job tasks' are distilled out of the work processes of which they are an integral part, and the range of knowledge, skills and problem-solving abilities that are actually required in real life to get the 'tasks' done and done well, appear as the work of somebody else. In fact, most clerical workers recognise that their job descriptions do not reflect 'what they do', but they overlook the systematic character of this disparity and its significance for clerical workers in general.

Enforcement through 'job tunneling'

Though the 'control function' of bureaucratic job language may seem remote from day-to-day life on the job, its political power becomes clear when an individual clerical worker applies for promotion or for another job in a highly bureaucratised setting. At these times, her qualifications will be judged, in part, on the basis of her work experience in past jobs and, in part, on her demonstration of competence to function in the new job. In both cases, bureaucratic job language sets the limitations for interpretation of her skills and competencies.

In the case of past work, the 'experience' of the candidate will be assessed not only on the basis of what she says about her former job but on

its formal, bureaucratic specifications. This means that she will have a hard time claiming as her own 'experience' those activities, knowledge and skills that were outside the scope of her official authority to act, even though she might have done them on a delegated basis. So, for example, if a senior secretary with an intimate understanding of the program area in which she was working were to apply for a 'program officer' position in the same or a related area, she would find it extremely difficult to get recognition for the 'program knowledge' she acquired while in a secretarial position.

In the case of her competence to perform in the new job, Reimer's research shows how the bureaucratic control language provides a restrictive framework for interpreting the character of job activities. So, for example, when an applicant for a clerical position demonstrates how she would interpret and make decisions about handling incoming mail (which items are urgent and which ones routine, who they should go to etc.) this will be noted and recorded as a demonstration of the competent performance of a standard clerical procedure called 'priorising the mail'. The interview process will not acknowledge this description as a display of 'program knowledge', despite the fact that performing the 'clerical procedure' will require her to know the individuals, the events, the issues and priorities of the program area in which she works. Reimer refers to this structure of interviewing as a form of 'job tunneling' in which 'the larger scope of program knowledge is sheared from the account' of the work experience, skills and knowledge of clerical workers (Reimer 1987, p. 209).

'Job tunneling' and 'shearing' are central to the 'invisibility' and appropriation of the skills of women. As in the case of job evaluation just examined, the problem is not just what we fail to notice. The problem is rather a highly technical and professional practice by which the complexity of work and the skills and knowledge of female workers are reassigned to those above them in the job hierarchy (Reimer 1987). Positions organised in this manner are 'gendered' before individuals are hired into them (Reimer 1987; Acker 1989; Cassin 1990). This feature of organisational and job design is central to the growing observation that gender is not just a feature of individuals, but a particular way of organising institutional life.

Gender and jobs: What does it come to?

Organisational design is like machine design. Both are developed to permit some individuals, and not others, to do particular kinds of work. In both cases, to borrow again from Cockburn, the 'units of work' are political. They contain the social as well as technical objectives of the designers.

I have tried to illustrate, both in the industrial examples of the last section and the public service settings examined here, that 'gender structuring' is a pervasive and deep-seated feature of the design of working life. Work is gendered not only in the way it is divided and distributed among the population. It is gendered in the way it is conceptualised and assembled as a work process.

When we talk about design and assembly of work and skill, decisions about training are not far behind. Training is not just an organisational response to situations which already exist, but an active part of bringing new 'situations' into being. Training is a vehicle for shaping the relations between people, and as such it touches on all of the conflicts of interest over work and skill that have been explored in these pages. Thus, it is becoming a central theatre of 'power play' in the current climate of restructuring. This is the subject of Section 3.

SECTION 3

TRAINING AND GENDER: THE POLITICS OF WHO KNOWS WHAT

Training policies and practices are central to the complex web of relations that we refer to as 'skill'. The way training is done is part of the process of constituting work as 'skilled' or 'unskilled' and thus of determining the power and privilege of the worker. The type and length of training associated with work are often used as criteria for administrative judgments about the presence or absence of the skill of both work and workers. In other words, training serves as a kind of proxy for level of skill (Gaskell 1986).

This relation between training and skill recognition has a strong 'gendered substructure' (Acker 1989) which has for many years worked to the benefit of men and the detriment of women. The pattern is familiar. Men have tended to receive formal training as part of their employment, particularly on-the-job training, often supervised by unions as in the trades. Training in this context is most often related to certification and/or to specific career paths based on qualifications and seniority. This holds true not only for steel workers but, also, with suitable variations, for school administrators and corporate managers. Women, on the other hand, have tended not to receive formal training as part of their jobs. They tend to have more schooling than men prior to employment but this does not count in the same way as evidence of 'skill', as we saw in the response of the job evaluators. The remainder of a woman's learning in the workplace tends to be an informal—and unacknowledged—product of her working relations. With some notable exceptions (e.g. nursing), occupations where women predominate tend not to have a formal system of advancement based on incremental certifications, and women who apply for other kinds of professional development courses available in their workplace are often rejected on the grounds that the course is not 'job relevant'. The outcome of all this is a considerable disparity in the levels of training claimed by men and women.

Politics of definition

The problem with this picture of 'difference' between men and women is that it is partly a product of how training is defined. The evidence is clear that gender itself figures in what 'counts' as training and what does not (Gaskell 1986; Beechey 1988). The clearest demonstration is that entry level positions into which men are hired, from bank clerks to bricklayers, are commonly designated as 'trainees', 'apprentices' or 'helpers' giving notice that within a few years, or even a few months, the incumbent will advance on the basis of what has been learned there (Acker 1989). By contrast, entry level positions into which women are hired are more likely to be treated as permanent positions, and women are left in them as long as they will stay. The experience they gain and what they learn along the way is seen only as making them 'better at their jobs'.

The presence of unions also features in what 'counts' as training and what does not. The training of workers has most commonly been formalised where unions have a strong hand, and most commonly obscured where management has been free to use the informal method of 'sitting by Nellie' (learning by sitting with someone and observing them). What is consistent is the direct relation between the recognition of training and skills, and the presence of an unstated 'gendered substructure' (Acker 1989). This occurs because unions have been historically much more involved in 'claiming and defending' skills in male-dominated than female-dominated occupations:

> Skills are most likely to receive recognition in the wages structure if unions effectively claim and defend them. The problem is that management may impose new skills on workers and resist acknowledging their existence if training is very short or informal training and takes place outside the ambit of union control and initiatives. (Rainbird 1988, p. 176)

Thus, the significance of training in the workplace is not only technical. It shapes the social as well as the technical organisation of work. In fact, in the current round of restructuring, it is precisely the capacity of training to transform the social relations of the workplace that has put it high on the political agenda.

Training as organisational design

Training is a proactive as well as a reactive undertaking. Training programs are created not only as a 'response' to other changes (e.g. technological innovation) but are also used to pursue particular organisational objectives and to effect selected changes in workplace relations. Used in this way, training is a beachhead for organisational change, not a response.

In the current climate of restructuring, training is being widely used proactively by management as a tool for organisational redesign. It is a mainstay of corporate policies to pursue equity goals in the workplace, not only for women but also for aboriginal peoples, for other racial and linguistic minority groups, for the disabled and for other designated groups from time to time. Training initiatives are also being used to reorganise trades work in many industries, through the introduction of multiskilling, 'job enhancement' measures and various other controversial forms of flexible work practice. Training is also the principal strategy of current initiatives to introduce management philosophies stressing the new 'corporate culture', including flattened hierarchies, work teams, quality circles and other innovations inspired largely by the Japanese model of industrial relations. In all of these ways, training is designed specifically to serve changing managerial goals.

As in other aspects of organisational design, the political stakes surrounding these forms of training are extremely high. They undermine the existing organisation of job categories and thus the organisational cohesion and power of the unions. They disorganise existing patterns of communication and authority at all levels of organisational life, from the 'work team' on the assembly line to decision-making in the executive suite. They disrupt the patterns of identity and community that are part of the living fabric of working life. Identities of gender, race, rank and social or class allegiance are all part of the fabric that training is meant to shape. Thus training, by definition, is an arena of conflicting interests in which the social and the technical are inseparable.

As awareness grows about the far-reaching implications of training as a tool of restructuring, training initiatives are becoming a more central aspect of labour relations. Unions are starting to see how training issues are central to their own interests, including not only technical upgrading to protect jobs, but also longer range policy issues like plant-based involvement in job design and labour force planning (Rainbird 1988). In this context, unions are being encouraged to enter into 'cooperative' or 'partnership' training arrangements, either with individual employers or in sectoral initiatives under the sponsorship of governments (see Hyman & Streeck 1988; Rainbird 1990).

The contradictions inherent in these arrangements will surface over time, since the fundamental interests which unions and management have in organisational design are not the same. As we saw in the Oregon equal-pay project, conflict will emerge over the technical details of training policy and practice as it becomes clear that the readily available, and even readily imaginable, models of training are deeply embedded in the existing power structure. The following example of a skills development model for clerical workers will illustrate the point.

Training and gendered institutional arrangements

The potential for political conflict over skills development is foreshadowed in the proposal from a British researcher to use a combination of job development and training to increase mobility for clerical workers (Murray 1989). The proposal is meant to address the common situation of offices undergoing technological upgrading, where Murray observes that 'lingering problems' in systems design and implementation result in the emergence of 'clerical technology related skills that are not recognised'. He suggests the creation of specific 'clerically based systems troubleshooter' jobs for these workers along with the use of training courses to promote the development of their emergent skills and to 'recognise and develop' the transfer skills that would increase their mobility (Murray 1989, p. 537). This proposal appears on the face of it to be quite sensitive to the problems of gender and skills recognition and to be quite genuine in its search for a remedy that will serve the interests of the clerical workers. It is the sort of scheme that a union sympathetic to women's interests might well support or even propose.

A closer look at this 'solution', however, will show its potential for very contradictory results. The problem is how the remedial measures proposed are embedded in the same kind of 'organisational logic' or institutional arrangements that they are meant to overcome—that is, the creation of a new position and training course that were 'specifically clerically based' would routinely reproduce all of the same problems that limit the pay, recognition and mobility of clerical workers in their existing jobs (Acker 1989). To be specified as job functions at a clerical level, the 'troubleshooting' activities in these positions would have to be represented as standard tasks and procedures, delegated and supervised from above within regular clerical reporting relations. Under these arrangements, the person to whom these clerical positions report would get the lion's share of the recognition (the point scores, the pay and the mobility arising from the conduct of this work) as we saw in the study of clerical workers. The major

beneficiary from this scenario would be the employer who (assuming the presence of a union) would have covered the possibility of a grievance arising from clerical workers doing work outside their job description. But the situation of the clerical workers themselves would be only marginally improved.

Furthermore, in the Murray proposal, the hope of using training to 'recognise and develop transfer skills' would also be limited by the disparity in organisational status between 'clerical' and 'systems' work. Individuals who eventually tried to cash in on the promise of 'transfer skills' to move out of the clerical ranks would likely find themselves victims of the kind of 'job tunnelling' and 'shearing' off of their systems knowledge that was described by Reimer. In other words, it is not simple lack of skill or its recognition that isolates clerical workers from both vertical and lateral mobility, but the way their skills are appropriated and reassigned. Training conceived within the same institutional arrangements would be part of the problem, not part of the solution.

Training, power and privilege

The 'moral' of this training story applies not only to gender relations in training, but to many other political dimensions of training as well. Training opens up a hornets' nest of questions of power and privilege. Who controls access to training and what are the criteria? Do the access criteria (e.g. literacy) conflict with other traditions of privilege (e.g. seniority)? Whose career paths will be jettisoned and whose enhanced? What aspects of the collective agreement will be affected, in the short term? in the long term? If women or minorities are to be 'preselected' for training through equity policies, what impact will that have on the workplace? on the union? The list of potential conflicts goes on.

The crux of the matter is that training is never neutral. It is a battlefield for a broader struggle over knowledge and power in work. The questions at stake are how working knowledge will be organised, whose experience will it represent and whose interests will be served. Training is not the answer to these questions; it is the form of the struggle.

Conclusion

This brief tour through the politics of working life has aimed to show that even the most basic features of work life—machine design, job design, training design—are all implicated in the production of a gender order in

the relations of work. The gender order is realised not only in how work is divided and distributed, but in how it is conceived and assembled. It is not a superficial feature of working life, but integral to its organisation.

The gender organisation of jobs does not start with the physical presence of males or females, but with particular decisions about the organisation of work. These choices build upon dominant images of historical 'maleness' and 'femaleness', including both physical and social differences that are part of 'life-history-in-society' (Connell 1987). These differences are 'made to matter' (Cockburn 1986) in the design of work and working relationships in ways that translate into male privilege on the job. The politics of work design relies heavily on the definition of skill, and on the distribution of power and privilege which that entails. The process of definition is itself highly politicised, whether it takes place through overt political struggle or through rational bureaucratic methods.

In the industrial and public service work examined here, the design features through which a gender order is achieved and enforced include assumptions about bodily size and capacity in the planning of 'units of work' (e.g. keyboards and printing 'formes') and the assumption of gendered social interaction in the organisation of work and learning (learning 'the knack' and 'sitting by Nellie'). Job design also incorporates a gender order through the assumption of the prior right of males to continuing employment and career advancement, and through the subordination and appropriation of women's labour to this end.

These features of a gender order are part of the 'structural integrity' (Acker 1989) of working life, in which the interests of unions as much as employers is deeply embedded. The idea is very seductive that rational bureaucratic methods can eliminate the forms of 'power play' which have led to this structure of privilege. But the evidence points to the contrary—that is, even as a fully elaborated technical and professional practice, dressed in a three-piece suit or a silk blouse, organisational design is political and gender is a central axis of power.

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READINGS

1

THE TALENTS OF WOMEN, THE SKILLS OF MEN: FLEXIBLE SPECIALISATION AND WOMEN

J. JENSON

J. Jenson, 'The talents of women, the skills of men: Flexible specialization and women', in *The Transformation of Work?*, ed. S. Wood, Unwin Hyman, London, 1989, pp. 141–55.

As Chapter 1 points out, for many people a well-formulated strategy of flexible specialization introduced into the labour process will allow both capital and labour to move beyond many of the problems of the current crisis. For others, however, there is little basis for such optimism, since flexible specialization has an undesirable and costly downside, whose consequences are measured in terms of unemployment, income polarization, and fragmentation of the labour movement. For them, the future will not, and should not, be founded on flexible specialization.

This chapter is also cautious about flexible specialization because of the gender-blind nature of many discussions of it. If one begins with the assumption that workers come in two genders, then one enquires about gender-biased or gendering effects in the social relations prophesized for the future. Gender bias can arise from differential locations of women and men in the new labour processes. Gendering effects are even broader, in that they are the consequences of the articulation of gender and class relations in the social construction of women and men's identities.

To the extent that enthusiasts of flexible specialization are doing more than providing a recipe for management to surmount the current crisis, they must ask whether women and men are located in the labour force in such a way that they will benefit similarly from any new emphases on skilled labour. They must also enquire whether – without substantial political struggle before or at least concurrently with the move to a new wage relation and regime of accumulation – women even have the same potential for positive outcomes from their model of flexible specialization which may exist for some men, at least in certain progressive variants of the theory.

This chapter examines gender bias and gendering effects in particular by exploring the ideas about flexible specialization propounded by Piore and Sabel in *The Second Industrial Divide* (1984). For Piore and Sabel, current changes in the production process reflect a move away from the special purpose machinery of mass production, which relied

primarily on semi-skilled and unskilled workers to make standardized goods for mass consumption. New processes have begun to appear which utilize general purpose tools and skilled workers with the know-how to make quick adjustments to changing markets and more differentiated tastes. Out of the observation of such changes in the labour process, Piore and Sabel construct a political programme of 'yeoman democracy'. They suggest that such new political forms could arise out of the greater control over their working conditions and working lives exercised by the skilled workers of the post-Fordist sectors.

In this general argument about capital accumulation, labour processes, and political forms, the concept of skill and notions about influence of skilled workers provide a keystone for the entire edifice. This chapter concentrates on the implications of the observation that skills are historically rather than biologically or technologically constructed and that social construction is part of the process by which unequal social relations are reproduced. Such relations may reflect not only the unequal structures of class power but potentially all other differences, including race, ethnicity, language and sex. It is an argument whose implications strike at the heart of the unproblematic meaning of skill, which so much of the work on flexible specialization assumes. In fact, it problematizes that concept.

Gender biases

Hints that women may not do very well under flexible specialization become especially apparent when reading Piore and Sabel's fond references to Proudhon and suggestions that his utopian visions can be a model for the post-Fordist future (1984: 28ff.). However, the nineteenth-century workers' movement, in France especially, long suffered under the influence of the choice Proudhon gave women – to be housewives or harlots. Embedded at the heart of his understanding of the independent, craft-based working class – which he celebrated – was the belief that women should work only in the home and that any self-respecting working man ought to be able to support his non-waged wife and children. For Proudhon, the family nurtured values which could not survive in the larger world of mutualism, and, in particular, wives' unstinting and supportive affection for their husbands was a consolation and protection against the most vicious consequences of the productivity standard which characterized mutualist society.

These notions of gender and family relations atrophied in the official ideology of the French labour movement when the mass/class unionism of the Second and Third International defeated Proudhonism (Moss, 1976: Chapter 1). Thus, where Proudhon condemned

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female labour as well as political action by unionists, strikes, and collectivist associations, mass/class unions advocated equal pay for equal work and the organization of women workers who at the time were rapidly entering the paid labour force in the new industrial sectors (Jenson, 1988; Moss, 1976: 52).

Yet, the authors of *The Second Industrial Divide* return to the Proudhonist utopia, using it as a model for their world of flexible specialization where generalized skills are put to work to meet the changing market demands of consumer capitalism. They ignore its gender biases, as they do its lack of emphasis on class solidarity and political action.

It would be wrong, of course, to accuse Piore and Sabel of Proudhon's sins against women, just because they find inspiration for their own utopia of flexible specialization in his enthusiasm for a craft-based world. Nevertheless, in many discussions of flexible specialization, women are either invisible or confined to quite 'different' places.[4] This treatment of women – and the understanding of gender which thus resides at the heart of the analysis – is exemplified in Piore and Sabel's work, both *The Second Industrial Divide* and other pieces written earlier. In none of the earlier books and articles is it common to find a working woman. Moreover, when they do appear, as they do infrequently, they are different, not like the 'real' workers in their work lives and labour market location. In Sabel's *Work and Politics*, where no effort is made to use gender-neutral language, despite the fact that the book was only published in 1982, the problem is clear. The worker is always a 'he', seeking a political strategy for 'his' workplace relations. Any women who do appear are always marginal workers, whose relationship to the labour force is temporary, uneven, and much influenced by other aspects of their life situations.

In Piore's path-breaking work on dual labour markets, women are mentioned only as part of the secondary sector. These important works did make space for discussions of gender bias, by making certain assumptions about women's labour-force participation. For example, in Berger and Piore (1980: 31), women appear as marginal workers in the secondary sector, who along with peasants and migrants differ in their work relations from 'the customary labour force' or 'the traditional working class'. Simplistic assumptions about women's social and economic situation mean Berger and Piore define women as married or otherwise dependent on men. This family relationship gives them access to the economic and social security which their participation in the secondary labour market would otherwise deny them.

> The migrants (foreign and domestic), the rural workers and the women are attractive precisely because they belong to another socio-economic structure and view industrial employment as a

> temporary adjunct to their primary roles. They are willing to take jobs because they see their commitment to these jobs as temporary, and they are able to bear the flux and uncertainty of the industrial economy because they have traditional economic activities upon which to fall back. (ibid.: 50)

Similar arguments surface in Piore and Sabel (1984: 167ff.); women appear in the list of categories of a labour reserve which was called up in the boom years. However, once these categories come to demand the status of full participants – wages and benefits comparable to those of other workers – they cease to have any specificity; they disappear into the general category of worker. In this way, although the segmentation literature (in which Piore's work, in particular, is so important) does mention women, by treating them as any other marginal category the analysis remains blind to the specific structuring effects of gender relations which have been uncovered over and over again. SU5

One can only draw the conclusion that in these works the authors are assuming that all the real workers are like men; gender, race or nationality enter into the analysis only to explain divergences from the norm. There is no room for the notion that women might normally work or that working women might be the norm in some sectors. 'Women' are presumed to be marginal workers and there is no consideration of the situation of women in the traditional working class whose wages are systematically lower or who are confined to the semi-skilled and unskilled jobs of the primary sector, although their commitment to full-time employment is as great as men's and their training may even be as long. Indeed, for Piore it is almost as if 'women' will somehow disappear with modernity in that 'the labour force for secondary jobs tends to rely heavily, although not exclusively, upon *preindustrial* groups and classes' (Berger and Piore, 1980: 50 – emphasis added). Actually, it sometimes seems as if, for Sabel and Piore, a woman working full-time, without interruption, in a mass-production industry would have to be a man.

The nub of the criticism is not the language or lack of discussion of women's work, however. It lies elsewhere, in a concern about the underlying analytic assumptions. In assuming that all 'real workers' are the same and/or that women are either non-waged, these analyses close off the possibility of seeing the gendering effects which exist in the full-time labour force because they exist in *all* work relations. Thus, while they may be able to describe – although not necessarily explain – gender bias, they remain blind to links between the social construction of gender and of skill. Therefore, they provide a picture which is inadequate for apprehending the reality of that which they wish both to describe and control.

If, for example, employers make use of the female and male labour force in different ways, if the development of a more 'flexible' labour

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force also means rising rates of feminization, if only men are likely to be 'flexible specialists', then a world of post-Fordist flexible specialization is very different – and less benign – than that which Piore and Sabel assume. Furthermore, where the diagnosis of the world is different, the prescriptions for practice are not likely to work. Therefore, the question of where women fit into these analyses is a crucial one.

Recent studies of women in the labour force have found all three of the above statements to be empirically correct. We now know that the level of sex segregation is very high indeed (Bakker, 1988; Hagen and Jenson, 1988). Studies of the industrial sector have often shown that women and men work in different industries. More recent analyses reveal that even in the same workplaces women and men work at different jobs and often in separate locations. In particular, women are increasingly concentrated in jobs classified as unskilled or semi-skilled, which are the classic ones of mass production. Moreover, women and men occupy different lifetime career trajectories with women's being much more truncated than men's. Clearly, female and male workers have not been employed in the same way.

The empirical validity of the second if-statement emerges in studies of the recent efforts by employers to create and manage a more 'flexible' labour force. Flexibility – in which hard-won protection of workers' conditions of employment are lessened – has also brought feminization of the labour force in its trail. It was most often women, especially married women, who took up the offers of part-time and temporary work. With a recognition of both the reliance on women for mass-production industry and the popularity of women for more flexible labour contracts, the economic forces behind the great rise in the female rate of labour-force participation becomes clear (Bakker, 1988).

The detection of gender biases in these aspects of post-war economies makes the third if-statement even more compelling. Much recent work, reported below, demonstrates that women are closed out of skilled work by a variety of social mechanisms. This work also forces us to recall that skill is a socially constructed concept and that its content will therefore be contested not only by capitalists and workers but also by women and men. While Braverman's work made it very clear that definitions of jobs and skilling arise out of struggles among workers and capitalists, further analyses of the labour process have exposed the coexistence of struggles among women and men, which are simultaneously crucial to the development of concepts of skill (Phillips and Taylor, 1980: 82ff.) Such studies cast doubt on the notion that flexible specialization will open new possibilities for many working women.

The social construction of skilled work

One essential aspect of the construction of a skill is the process of differentiation, the erection of distinctions among kinds of work, and therefore the workers who perform them. The result of this process is that differences among workers exist and reproduce within the working class. It was the consequences of skill-based differentiation which since the latter part of the nineteenth century led many militants in the labour movement to advocate forms of organization which downplay craft distinctions. The rising organizations of industrial workers feared the divisive and fragmenting effects of craft bodies founded on principles of exclusion. And, of course, this fear was never groundless. Craft unions which did not extend their sense of community to incorporate the semi-skilled and unskilled industrial workers did not contribute as much to working-class solidarity as did industrial unions or those with a territorial basis of organizing.

The reality of the fear lies in the process of differentiation by craft, which involves both technological and ideological elements. The outcome of skill-based differentiation is the creation and continuing validation of an identity through a labour process which draws boundaries around 'sameness' and 'difference'. Since any particular group of individuals can construct its identity in a plurality of ways, it is very important to the labour movement that it uses the factories and other workplaces of industrial capitalism effectively to bring into being a self-conscious (that is a self-identified) working class. Political struggle culminating in class formation and fostering class consciousness is an important ingredient of any successful labour movement's practice (Brodie and Jenson, 1988: Chapter 1).

The difficulties of developing solidaristic class identities among craftsmen have been long understood by the labour movement. It needed strategies designed explicitly to overcome fragmentation based on skill because the nature of skilled work itself had a tendency to encourage identities based on difference. Cockburn's (1983) work on the history of compositors' skills provides a concrete example of this tendency. The compositors worked hard to guarantee that they retained as much control over their workplace as possible. This meant that they had to eliminate the possibility that unskilled women or men would take parts of their work. Compositors struggled hard to maintain the dominance of adult men over women and boys – 'the demon of cheap boy labour' – from the late nineteenth century until the middle of the twentieth. Their recent history has been one in which they have had immense difficulties maintaining their control over definitions of skill and thus over the workplace, in the face of new technology (Cockburn, 1981: 47; 1983: *passim;* Zeitlin, 1985: 195ff).

Each struggle over technological innovation reproduced a complicated and nuanced social construction of compositors' identities both

as workers and as men. The process involved the compositors' ability, through workplace power, to keep women, boys, and any other unskilled labour, out of the print shops. With regard to women, they managed to do this by refusing to work with women, to apprentice women, to use the type set by women. These actions all discouraged owners from attempting to employ women (whose wages were substantially lower) anywhere where the compositors' union was well-organized (Zeitlin, 1985: 193-5, 214-16). This long struggle culminated in keeping the compositors' craft virtually 100 per cent male, not simply because the men had the workplace power to force employers' compliance but also because women themselves were discouraged enough not to apply.

> Girls were not considered suitable for apprenticeship. Physical and moral factors (girls were not strong enough, lead was harmful to pregnancy, the social environment might be corrupting) were deployed ideologically in such a way that few girls would see themselves as suitable candidates for apprenticeship ... The process of appropriation of the physical and mental properties and technical hardware required for composing by a group of men, therefore, was not only a capitalist process of class formation...but also a significant influence in the process of gender construction in which men took the initiative in constituting themselves and women in a relation of complementarity and hierarchy. (Cockburn, 1981: 46)

This example of the compositors' craft clearly illustrates two important points. The first is that identities can only be constructed as part of a process of differentiation. The second is that identities contain elements which order relations between women and men as well as those between labour and capital. Cockburn's historical analysis demonstrates that printers always experienced technology, and particularly the introduction of new technology, not only as affecting the balance of power in class relations but just as importantly as an aspect of gender power. When the compositors faced technology which threatened the dominance of the craftsmen in the shop, they fought it as a challenge to their own power, which included their power to be men. They experienced the innovations as emasculation, and they organized their struggle against them as a fight for virility (Phillips, 1983: 102). For these printers, their identity as skilled craftsmen encompassed not only the boundaries between themselves and the owners and themselves and non-skilled men, but also a gender boundary (Cockburn, 1981: 49). The printing craft involved the social construction of printers as men and as skilled workers. The two elements were inseparable.

Such work amplifies our understanding of the ways that gender relations are reproduced in work relations. One of the major accomplishments of Cockburn and others' work is to demonstate that

feminists have paid too exclusive attention to the family as the site of reproduction of women's oppression. They point to the crucial contribution of work and workplace relations in the creation and continuation of relations of unequal gender power, at the heart of which is the very notion of what constitutes skilled work. As a result, the gendering effects of 'public', and especially production, activities have now come under scrutiny. Such analytic correctives have considerable implications for analyses of flexible specialization, where the concept of skill plays such a central role.

Enthusiasts of flexible specialization stress that the positive results for labour in the new conditions will follow only from successful negotiations by workers to capture the potential of new technology and turn it to their advantage (Piore and Sabel, 1984: 277ff. and passim). In any consideration of conflictual social relations, therefore, they highlight only the contest between management and labour. Nevertheless what remains yet to be recognized is that workplace politics simultaneously include the struggles over gender power, which involve, in Cockburn's (1981: 56) words, a 'power play' between women and men, even where the workplace is predominantly single-sex.

The skills of men, the talents of women: gendering technology

Studies of the segmentation of work have demonstrated repeatedly that women and men tend to hold different jobs, to do different kinds of work and, therefore, to have substantially different wage structures. It is important, however, to comprehend how this situation arose. One way is through a process by which both jobs themselves and the appreciation of such jobs are gendered; they exist in social relations of hierarchy reproducing unequal relations of gender power. As Phillips writes:

> The hierarchies of skill are not just an imperative of capitalist production: they express at the same time a system of male dominance in craft identity which is inextricably (if confusingly) linked with masculinity...jobs are created as masculine and feminine, with their skill content continually re-drawn to assert the dominance of men (1983: 102).

The consequence is that the skills so important to notions of flexible specialization are unequally distributed.

Most occupations have a gender and, given existing assumptions about femininity and masculinity, it is those which incorporate the least control over the manipulation of technology which are designated

'female jobs' or which women fill. Therefore, major changes will involve either 'masculinizing' women or finding a way, through political action, to remove the gender designation of jobs. Currently, those gendered jobs are not formally classified as equally skilled. Often what men do is called skilled whereas what women do is considered not skilled, generally because it is thought to involve some natural female talent. The question is why this distinction exists and what practices reproduce it. The most convincing explanation is one which explicates the ideological content of skill definition.

A major factor involved in the differentiation between 'women's work' and 'men's work' is that there is a *real* difference in the relationship of each gender to technology. Managers tend to assign women to jobs which exclusively involve the operation of machinery. In this way, women become the manual operators of the machines while men tend to design, set up and service them. In addition to the highly skilled technicians and engineers who make and/or install machinery, managers value the 'all-rounders', the workers who can turn their hand to anything that needs doing, who can untangle a complicated mechanical or production problem and resolve the difficulty (Cockburn, 1986: 181). That kind of general skill is valued (that is, better paid), while the worker who seems merely to stand aside when a problem develops, and never takes the casing off the machine is not only less valued but more easily replaced. There seems to be an impenetrable, invisible barrier

> between operating the controls that put a machine to work and taking the casing off it in order to intervene in its mechanism... For an operator there is always someone who is assumed to know better than she about the technology of the machine on which she is working. That someone is almost invariably a man. (Cockburn, 1986: 181).

It is these social relations which so often separate women from technology.

There are three basic reasons why women have different relationships to machines than men do. A first reason – which people often overlook in discussing the division of jobs – is the very design of the machinery. Cockburn (1981: 51-2) has documented the ways in which men construct machines which only men can easily manipulate, because the design itself incorporates assumptions about body size and strength of the workers doing the job. Thus the weight of components, the reach required to operate a machine, the general strength needed to perform the job may result from the inventor's presuppositions about who will use the machine. In this way, popular or even individuals' assumptions about the gender division of labour enter directly into the concept of the machine, the work station, and its

relationship to other machinery; these then take on a materiality which is embedded in the technology itself. But beyond the design of machines, assumptions about the 'average worker' also enter into working conditions constructed by bargaining between labour and management. When, for example, trade unions negotiate acceptable weight levels, bale sizes, loads, work breaks or sanitary facilities, assumptions about whether women or men will work there shape the discussions and partially determine the agreements the union is willing to accept. The negotiated outcomes may exclude women, if male trade unionists assume they will not – or should not – be in that workplace. Thus, the social content of technological possibilities is very great indeed.

A second reason that men and women hold different jobs – and therefore have different relationships to the machinery – lies in the assumptions of the managers who make assignments. Milkman (1983) explores in detail the ideological construction of work and the division of labour on the part of managers who do the hiring and she has documented how managers make an initial determination of whether a particular job is a 'woman's' or a 'man's'. For example, the notion that 'light industry' was suitable for women whereas 'heavy physical effort' was what men did, led managers in the 1930s and 1940s to fill the jobs of the electrical sector with 'girls and women' (ibid.: 167-8).

There is, of course, little relation between the actual amount of physical effort involved in any workplace and the patterns of employment by gender. Nevertheless, the notion that such differences do exist and are legitimate grounds for differential hiring practices are common; with these assumptions about whether a job is best filled by a woman or a man, the gendering of occupations proceeds. These decisions become part of the relationships of the workplace itself. They help to reproduce a situation which might have initially been an open one but which in time rigidifies along gender lines and itself becomes a major contribution to unequal gender relations at work.

Third, women themselves make a substantial contribution to gender segregation in relation to technology. Women and men's identities tend to contain deep assumptions about what work is proper and possible for each gender. Women's own identity often contains a notion of 'femininity' which, given the prevailing norms in most societies, excludes the notion that technical skill or familiarity with the machinery is feminine (Cockburn, 1986: 186). In the British pottery industry, women who work with men or do not do the traditional work of decorating pottery are thought unrefined and coarse by the other women workers (Sarsby, 1985: 71-3). In addition, many women have learned to escape the monotony of their factory work by defining their lives at work as worthless and trying to use the escape into romance as a way of revaluing themselves and their situations (Beechey, 1983: 29-30). In other words, women participate in the

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reproduction of their lack of control over the machinery which they tend.

All three reasons lead to the conclusion that operators and 'all-rounders' are made, not born. Men are not born 'handy' any more than women are born without the confidence to turn a screwdriver. The relationship to the machinery is socially created, and as such reproduces existing social relationships, in which ideas about gender play a crucial role. The ethos of the all-rounder – which comes closest to the ideal-typical worker in discussions of flexible specialization – is a masculine one. It involves not only certain abilities to deal with the machinery but also a sense of camaraderie which is highly social and which depends on being accepted by the group.

The politics of skills and talents

The argument thus far is that ideology is crucial for the gendering of jobs, in part through its role in constituting the definition of skill. Studies of working women continue to make visible the failure of women and men, trade unions and employers to acknowledge that much of what women do is skilled work (Beechey, 1983: 29-30; Charles, 1983:5). Very frequently, the work which women perform is classified as non-skilled because it is considered too 'natural' and/or 'merely dexterous' (Cockburn, 1981: 49; Milkman, 1983: 268; Phillips and Taylor, 1980: 6; Remick, 1984: 23). It reflects the supposed talents of women rather than any acquired skill for which recognition in the form of wages or social value is appropriate. This effect is clearly seen when we observe that a secretary's job is probably the ideal-typical form of flexible specialization, albeit in the tertiary sector. Yet, the ability of secretaries to work as flexible specialists is not recompensed but interpreted instead as something unexceptional, especially since it often bears a resemblance, in its multiplication of tasks, to domestic labour.

The most important implication of this gender-based definition of skills is that an on-going system of unequal gender relations is reproduced by the very process of skill acquisition. To the extent that, according to popular conceptions, women have talents while men have skills, a world of flexible specialization will be one in which women are absent. In fact, given this understanding of the definition of skill, the reasons for Piore and Sabel's lack of attention to women workers are more obvious. In the eyes of so much of the world, women are rarely skilled; and therefore, they are not likely to be the flexible specialists who constitute the ideal-typical worker in this brave new world.

This distinction between women as non-skilled and men as skilled is a social construct. As such, it is the product of everyday politics as well as the power relations of organized class struggle. Phillips and Taylor

(1980: 85), claim the distinction 'has been generated through the struggles of male workers to retain their dominanace within the sexual hierarchy'. It is, however, not necessary to assume that male workers *consciously* seek to subordinate women to their desires for sexual power in order to see a social process operating to value men's work over women's.

The conception of identity formation based on differentiation which was sketched above provides a way to understand the reproduction of notions of difference in gender and class identities. That sketch assumed no necessary pattern of gender power. The advantage of conceptualizing gender power relations in a more open-ended way is that it leaves the very production of gender and class identities to political and ideological resolution.

At the very heart of identity formation is, as we have seen, the process of differentiation, the establishment of boundaries of 'sameness' and 'difference'. Thus the process of forming class identities sets boundaries around classes which establish an understanding of those who share a common set of interests and those whose interests are different. Similarly, gender identities form to establish the boundaries between feminine and masculine lives. As we know from generations of politics in capitalist societies, classes neither rise spontaneously to take their place in history, nor do all class actors organize around the same comprehension of class relations. Rather, the variety of possible forms is large and the political consequences of variety are important. By analogy, then, it is easy to see that gender identities may be constituted in a way which allows sexual difference to determine almost all other aspects of life – including the definition of skill. Or, gender identities can minimize the importance of biological difference and men and women can strive to achieve a more equitable and fair world in which the existence of biological differences is simply acknowledged and accepted, but not permitted to culminate in relationships of unequal social power. Whether the former or the latter occurs is an outcome of real historical struggles, ones in which progressive actors such as trade unions and feminists must choose a political strategy which will have, as one of its consequences, an effect on the formation of gender identities.

Workers and their organizations through their political struggles are implicated in the constitution of identities. Obviously other actors are involved, just as identities are not only constituted out of workplace relations. With this caveat about the multiple sources of identity, it is, however, also important to recognize that workplace actors and actions do have a role to play. One central way in which this happens is that they help to determine the grounds for differentiation and the actual form that it takes. Thus, their strategic behaviour will be important in influencing whether there is a move towards equality despite the recognition of differences or one in which hierarchical inequities

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accompany the recognition of difference. In this way political struggle is crucial for achieving an egalitarian and progressive result.

It is the very importance of the outcome of this historical process which makes the absence of considerations of gender in discussions of flexible specialization so problematic, given that most authors see their work as an intervention in practice as much as theory. Gender-blind analyses will only allow the reproduction of existing social relations, in which gender identities have thus far been not only different but also profoundly unequal. They will not help to overcome gender biases nor alter the gendering effects of work relations.

A number of strategies is available which affect the conditions under which identities are constructed. Examination of the example of work groups, which are so crucial to situations of flexible specialization is helpful to make this point. The observed importance of social acceptance in work groups as well as the entrenched idea that women's relationship to machinery differs from that of men is crucial when evaluating the differential gender effects of flexible specialization. If, as has been argued, workplace relations contribute to identities constructed around both class and gender, the work groups are a major locale where that occurs.

One form of restructuring under post-Fordist regimes of accumulation has involved a move away from the more rigid forms of labour discipline appropriate to assembly lines. In response to technological change in which a knowledge of the machinery is required, new management practices emphasize small groups which work together, job rotation and workers' participation in regulating production. These are all very different from the habits of the traditional assembly line. But studies are already demonstrating that these new procedures are not without gender bias in their application. In an examination of work reorganization around participation schemes in the automobile industry, Wood (1986: 426) found that women and men were differentially affected:

> For example, on the final inspection section, it fostered genuine group working; for many of the male production workers, who were working individually, the scheme had basically facilitated regular small group (quality circle) meetings; whilst for the women who were working on short assembly lines at various points in the production process, it largely meant job rotation, that is increased mobility between very limited tasks, albeit on a basis worked out by the women themselves. This example illustrates how the different relationships which various groups of workers have to technology ... remain even in the modern, more integrated factories, and more importantly mediate the effects of worker participation schemes.

In part what is involved is the constitution of work groups which can

respond in a flexible way to the new automated work by adjusting quickly to changing needs of production, deploying effort where attention is needed at any moment and thus increasing both productivity and the intensity of labour. What is unclear is whether such groups will mix together workers who are 'different' in ways which are relevant to the actors involved. Such groups are encouraged to develop ties among themselves and even to compete with other groups over meeting production norms, and improving efficiency. In such tightly knit work collectives, the topic of group composition comes to the fore. Thus questions of difference – whether to include and co-operate with workers who are ethnically, racially, or sexually 'different' – can appear in the workplace. Where the practices of Fordism de-emphasized differentiation among workers to some extent, uniting them by the moving line, stress on co-operation, on consultation, and on planning can make it seem compelling to find 'pals' with whom one feels comfortable. In this way, as a by-product of the new management form of work organization, internal lines of cleavage in the working class around visible differences may be accentuated. Work groups, by their very form, foster 'we/they' feelings and relationships; boundaries are drawn which differentiate.

Technical jobs are often made up of teams of men used to each other and accustomed to working together. As Cockburn (1986: 182) found in her field work, for managers and male workers, if a woman should 'present herself for the work she would not, it was explained many times, fit into what was an existing all-male team'. Therefore, to the extent that work groups constitute themselves around ideas of who 'fits in', mixed groups are unlikely to form, both because notions of masculinity and femininity exclude the possibility of female competence ('she couldn't pull her weight') and because managers and workers recognize implicitly that the very process of group bonding includes reinforcement of gender identities ('she wouldn't like the language and the jokes of the lads'). Thus sexual difference, often carried by a discourse of sexual innuendo, becomes a powerful limit to the development of mixed work groups. Therefore, the work teams that enthusiasts of flexible specialization predict with such relish are likely, under current workplace politics, to be single-sex groups, for which gender difference becomes a boundary.

Conclusion

This chapter has examined flexible specialization through the lens of gender. Beginning with the assumption that workers are both female and male, it asks about gender bias and gendering effects which might result from a shift to flexible specialization. The conclusion which we can draw is that, without political challenges, gender bias is clearly

likely to result not only from the effects of segmentation of the labour force but also from the social construction of skill. In other words, 'new' social relations will continue to reproduce the situation in which women's skills are not recognized as any more than natural talents as well as the numerous social processes which divert women from mastery over new technology. These are the gendering effects of work relations – including the relation to technology and innovation – which most discussions of flexible specialization ignore. Exploration of the modes of gendering clearly demonstrates that there is a great risk that if flexible specialization is accepted in a gender-blind way it will reinforce and even strengthen unequal gender relations.

Restructuring the labour process so as to privilege skilled work and workers will further marginalize women unless political actors challenge long-standing processes which isolate women from machinery and which define women's skills as talents. Carefully constructed strategies in pursuit of equal pay for work of equal value – which by their very nature politically question popular notions of skill and value – may be part of such a process. Unions and other actors must also reject notions of 'difference' within the working class which can be the basis for legitimation of a two-tier labour force in which the 'real workers' all seem to be skilled men, and women and others who have been historically without power fill the marginal categories. Acceptance of such a politics of fragmentation can only be a step backward.

2

HIERARCHIES, JOBS, BODIES: A THEORY OF GENDERED ORGANISATIONS

J. ACKER

J. Acker, 'Hierarchies, jobs, bodies: A theory of gendered organizations', *Gender and Society*, vol. 4, no. 2, 1990, pp. 139–58.

In spite of feminist recognition that hierarchical organizations are an important location of male dominance, most feminists writing about organizations assume that organizational structure is gender neutral. This article argues that organizational structure is not gender neutral; on the contrary, assumptions about gender underlie the documents and contracts used to construct organizations and to provide the commonsense ground for theorizing about them. Their gendered nature is partly masked through obscuring the embodied nature of work. Abstract jobs and hierarchies, common concepts in organizational thinking, assume a disembodied and universal worker. This worker is actually a man; men's bodies, sexuality, and relationships to procreation and paid work are subsumed in the image of the worker. Images of men's bodies and masculinity pervade organizational processes, marginalizing women and contributing to the maintenance of gender segregation in organizations. The positing of gender-neutral and disembodied organizational structures and work relations is part of the larger strategy of control in industrial capitalist societies, which, at least partly, are built upon a deeply embedded substructure of gender difference.

Most of us spend most of our days in work organizations that are almost always dominated by men. The most powerful organizational positions are almost entirely occupied by men, with the exception of the occasional biological female who acts as a social man (Sorenson 1984). Power at the national and world level is located in all-male enclaves at the pinnacle of large state and economic organizations. These facts are not news, although

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sociologists paid no attention to them until feminism came along to point out the problematic nature of the obvious (Acker and Van Houten 1974; Moss Kanter 1975, 1977). Writers on organizations and organizational theory now include some consideration of women and gender (Clegg and Dunkerley 1980; Mills 1988; Morgan 1986), but their treatment is usually cursory, and male domination is, on the whole, not analyzed and not explained (Hearn and Parkin 1983).

Among feminist social scientists there are some outstanding contributions on women and organizations, such as the work of Moss Kanter (1977), Feldberg and Glenn (1979), MacKinnon (1979), and Ferguson (1984). In addition, there have been theoretical and empirical investigations of particular aspects of organizational structure and process (Izraeli 1983; Martin 1985), and women's situations have been studied using traditional organizational ideas (Dexter 1985; Wallace 1982). Moreover, the very rich literature, popular and scholarly, on women and work contains much material on work organizations. However, most of this new knowledge has not been brought together in a systematic feminist theory of organizations.

A systematic theory of gender and organizations is needed for a number of reasons. First, the gender segregation of work, including divisions between paid and unpaid work, is partly created through organizational practices. Second, and related to gender segregation, income and status inequality between women and men is also partly created in organizational processes; understanding these processes is necessary for understanding gender inequality. Third, organizations are one arena in which widely disseminated cultural images of gender are invented and reproduced. Knowledge of cultural production is important for understanding gender construction (Hearn and Parkin 1987). Fourth, some aspects of individual gender identity, perhaps particularly masculinity, are also products of organizational processes and pressures. Fifth, an important feminist project is to make large-scale organizations more democratic and more supportive of humane goals.

In this article, I begin by speculating about why feminist scholars have not debated organizational theory. I then look briefly at how those feminist scholars who have paid attention to organizations have conceptualized them. In the main part of the article, I examine organizations as gendered processes in which both gender and sexuality have been obscured through a gender-neutral, asexual discourse, and suggest some of the ways that gender, the body, and sexuality are part of the processes of control in work organizations. Finally, I point to some directions for feminist theory about this ubiquitous human invention.

WHY SO LITTLE FEMINIST DEBATE ON ORGANIZATIONS?

The early radical feminist critique of sexism denounced bureaucracy and hierarchy as male-created and male-dominated structures of control that oppress women. The easiest answer to the "why so little debate" question is that the link between masculinity and organizational power was so obvious that no debate was needed. However, experiences in the feminist movement suggest that the questions are not exhausted by recognizing male power.

Part of the feminist project was to create nonhierarchical, egalitarian organizations that would demonstrate the possibilities of nonpatriarchal ways of working (Gould 1979; Martin 1990). Although many feminist organizations survived, few retained this radical-democratic form (Martin 1990). Others succumbed to the same sorts of pressures that have undermined other utopian experiments with alternative work forms (Newman 1980), yet analyses of feminist efforts to create alternative organizations (Freeman 1975; Gould 1979) were not followed by debates about the feasibility of nonpatriarchal, nonhierarchical organization or the relationship of organizations and gender. Perhaps one of the reasons was that the reality was embarrassing; women failing to cooperate with each other, taking power and using it in oppressive ways, creating their own structures of status and reward were at odds with other images of women as nurturing and supportive.

Another reason for feminist theorists' scant attention to conceptualizing organizations probably lies in the nature of the concepts and models at hand. As Dorothy Smith (1979) has argued, the available discourses on organizations, the way that organizational sociology is defined as an area or domain "is grounded in the working worlds and relations of men, whose experience and interests arise in the course of and in relation to participation in the ruling apparatus of this society" (p. 148). Concepts developed to answer managerial questions, such as how to achieve organizational efficiency, were irrelevant to feminist questions, such as why women are always concentrated at the bottom of organizational structures.

Critical perspectives on organizations, with the notable exception of some of the studies of the labor process (Braverman 1974; Knights and Willmott 1985), although focusing on control, power, exploitation, and how these relations might be changed, have ignored women and have been insensitive to the implications of gender for their own goals. The active debate on work democracy, the area of organizational exploration closest to feminist concerns about oppressive structures, has been almost untouched by feminist insights (Rothschild 1987; Rothschild-Whitt, 1979). For example, Carole

Pateman's influential book, *Participation and Democratic Theory* (1970), critical in shaping the discussions on democratic organization in the 1970s, did not consider women or gender. More recently, Pateman (1983a, 1983b, 1988) has examined the fundamental ideas of democracy from a feminist perspective, and other feminist political scientists have criticized theories of democracy (Eisenstein 1981), but on the whole, their work is isolated from the main discourse on work organization and democracy.

Empirical research on work democracy has also ignored women and gender. For example, in the 1980s, many male Swedish researchers saw little relation between questions of democracy and gender equality (Acker 1982), with a few exceptions (Fry 1986). Other examples are studies of Mondragon, a community in the Spanish Basque country, which is probably the most famous attempt at democratic ownership, control, and organization. Until Sally Hacker's feminist study (1987), researchers who went to Mondragon to see this model of work democracy failed to note the situation of women and asked no questions about gender. In sum, the absence of women and gender from theoretical and empirical studies about work democracy provided little material for feminist theorizing.

Another impediment to feminist theorizing is that the available discourses conceptualize organizations as gender neutral. Both traditional and critical approaches to organizations originate in the male, abstract intellectual domain (Smith 1988) and take as reality the world as seen from that standpoint. As a relational phenomenon, gender is difficult to see when only the masculine is present. Since men in organizations take their behavior and perspectives to represent the human, organizational structures and processes are theorized as gender neutral. When it is acknowledged that women and men are affected differently by organizations, it is argued that gendered attitudes and behavior are brought into (and contaminate) essentially gender-neutral structures. This view of organizations separates structures from the people in them.

Current theories of organization also ignore sexuality. Certainly, a gender-neutral structure is also asexual. If sexuality is a core component of the production of gender identity, gender images, and gender inequality, organizational theory that is blind to sexuality does not immediately offer avenues into the comprehension of gender domination (Hear[illegible] and Parkin 1983, 1987). Catharine MacKinnon's (1982) compelling argument that sexual domination of women is embedded within legal organizations has not to date become part of mainstream discussions. Rather, behaviors such as sexual harassment are viewed as deviations of gendered actors, not, as MacKinnon (1979) might argue, as components of organizational structure.

FEMINIST ANALYSES OF ORGANIZATIONS

The treatment of women and gender most assimilated into the literature on organizations is Rosabeth Kanter's *Men and Women of the Corporation* (1977). Moss Kanter sets out to show that gender differences in organizational behavior are due to structure rather than to characteristics of women and men as individuals (1977, 291-92). She argues that the problems women have in large organizations are consequences of their structural placement, crowded in dead-end jobs at the bottom and exposed as tokens at the top. Gender enters the picture through organizational roles that "carry characteristic images of the kinds of people that should occupy them" (p. 250). Here, Moss Kanter recognizes the presence of gender in early models of organizations:

> A "masculine ethic" of rationality and reason can be identified in the early image of managers. This "masculine ethic" elevates the traits assumed to belong to men with educational advantages to necessities for effective organizations: a tough-minded approach to problems; analytic abilities to abstract and plan; a capacity to set aside personal, emotional considerations in the interests of task accomplishment; a cognitive superiority in problem-solving and decision making. (1974, 43)

Identifying the central problem of seeming gender neutrality, Moss Kanter observes: "While organizations were being defined as sex-neutral machines, masculine principles were dominating their authority structures" (1977, 46).

In spite of these insights, organizational structure, not gender, is the focus of Moss Kanter's analysis. In posing the argument as structure *or* gender, Moss Kanter also implicitly posits gender as standing outside of structure, and she fails to follow up her own observations about masculinity and organizations (1977, 22). Moss Kanter's analysis of the effects of organizational position applies as well to men in low-status positions. Her analysis of the effect of numbers, or the situation of the "token" worker, applies also to men as minorities in women-predominant organizations, but fails to account for gender differences in the situation of the token. In contrast to the token woman, White men in women-dominated workplaces are likely to be positively evaluated and to be rapidly promoted to positions of greater authority. The specificity of male dominance is absent in Moss Kanter's argument, even though she presents a great deal of material that illuminates gender and male dominance.

Another approach, using Moss Kanter's insights but building on the theoretical work of Hartmann (1976), is the argument that organizations have a dual structure, bureaucracy and patriarchy (Ressner 1987). Ressner argues

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that bureaucracy has its own dynamic, and gender enters through patriarchy, a more or less autonomous structure, that exists alongside the bureaucratic structure. The analysis of two hierarchies facilitates and clarifies the discussion of women's experiences of discrimination, exclusion, segregation, and low wages. However, this approach has all the problems of two systems theories of women's oppression (Young 1981; see also Acker 1988): the central theory of bureaucratic or organizational structure is unexamined, and patriarchy is added to allow the theorist to deal with women. Like Moss Kanter, Ressner's approach implicitly accepts the assumption of mainstream organizational theory that organizations are gender-neutral social phenomena.

Ferguson, in *The Feminist Case Against Bureaucracy* (1984), develops a radical feminist critique of bureaucracy as an organization of oppressive male power, arguing that it is both mystified and constructed through an abstract discourse on rationality, rules, and procedures. Thus, in contrast to the implicit arguments of Moss Kanter and Ressner, Ferguson views bureaucracy itself as a construction of male domination. In response to this overwhelming organization of power, bureaucrats, workers, and clients are all "feminized," as they develop ways of managing their powerlessness that at the same time perpetuate their dependence. Ferguson argues further that feminist discourse, rooted in women's experiences of caring and nurturing outside bureaucracy's control, provides a ground for opposition to bureaucracy and for the development of alternative ways of organizing society.

However, there are problems with Ferguson's theoretical formulation. Her argument that feminization is a metaphor for bureaucratization not only uses a stereotype of femininity as oppressed, weak, and passive, but also, by equating the experience of male and female clients, women workers, and male bureaucrats, obscures the specificity of women's experiences and the connections between masculinity and power (Brown 1984; see also Martin 1987; Mitchell 1986; Ressner 1986). Ferguson builds on Foucault's (1979) analysis of power as widely diffused and constituted through discourse, and the problems in her analysis have their origin in Foucault, who also fails to place gender in his analysis of power. What results is a disembodied, and consequently gender-neutral, bureaucracy as the oppressor. That is, of course, not a new vision of bureaucracy, but it is one in which gender enters only as analogy, rather than as a complex component of processes of control and domination.

In sum, some of the best feminist attempts to theorize about gender and organizations have been trapped within the constraints of definitions of the theoretical domain that cast organizations as gender neutral and asexual. These theories take us only part of the way to understanding how deeply

embedded gender is in organizations. There is ample empirical evidence: We know now that gender segregation is an amazingly persistent pattern and that the gender identity of jobs and occupations is repeatedly reproduced, often in new forms (Bielby and Baron 1987; Reskin and Roos 1987; Strober and Arnold 1987). The reconstruction of gender segregation is an integral part of the dynamic of technological and organizational change (Cockburn 1983, 1985; Hacker 1981). Individual men and particular groups of men do not always win in these processes, but masculinity always seems to symbolize self-respect for men at the bottom and power for men at the top, while confirming for both their gender's superiority. Theories that posit organization and bureaucracy as gender neutral cannot adequately account for this continual gendered structuring. We need different theoretical strategies that examine organizations as gendered processes in which sexuality also plays a part.

ORGANIZATION AS GENDERED PROCESSES

The idea that social structure and social processes are gendered has slowly emerged in diverse areas of feminist discourse. Feminists have elaborated gender as a concept to mean more than a socially constructed, binary identity and image. This turn to gender as an analytic category (Connell 1987; Harding 1986; Scott 1986) is an attempt to find new avenues into the dense and complicated problem of explaining the extraordinary persistence through history and across societies of the subordination of women. Scott, for example, defines gender as follows: "The core of the definition rests on an integral connection between two propositions; gender is a constitutive element of social relationships based on perceived differences between the sexes, and gender is a primary way of signifying relationships of power" (1986, 1067).

New approaches to the study of waged work, particularly studies of the labor process, see organizations as gendered, not as gender neutral (Cockburn 1985; Game and Pringle 1984; Knights and Willmott 1985; Phillips and Taylor 1986; Sorenson 1984) and conceptualize organizations as one of the locations of the inextricably intertwined production of both gender and class relations. Examining class and gender (Acker 1988), I have argued that class is constructed through gender and that class relations are always gendered. The structure of the labor market, relations in the workplace, the control of the work process, and the underlying wage relation are always affected by symbols of gender, processes of gender identity, and material inequalities

between women and men. These processes are complexly related to and powerfully support the reproduction of the class structure. Here, I will focus on the interface of gender and organizations, assuming the simultaneous presence of class relations.

To say that an organization, or any other analytic unit, is gendered means that advantage and disadvantage, exploitation and control, action and emotion, meaning and identity, are patterned through and in terms of a distinction between male and female, masculine and feminine. Gender is not an addition to ongoing processes, conceived as gender neutral. Rather, it is an integral part of those processes, which cannot be properly understood without an analysis of gender (Connell 1987; West and Zimmerman 1987). Gendering occurs in at least five interacting processes (cf. Scott 1986) that, although analytically distinct, are, in practice, parts of the same reality.

First is the construction of divisions along lines of gender—divisions of labor, of allowed behaviors, of locations in physical space, of power, including the institutionalized means of maintaining the divisions in the structures of labor markets, the family, the state. Such divisions in work organizations are well documented (e.g., Moss Kanter 1977) as well as often obvious to casual observers. Although there are great variations in the patterns and extent of gender division, men are almost always in the highest positions of organizational power. Managers' decisions often initiate gender divisions (Cohn 1985), and organizational practices maintain them—although they also take on new forms with changes in technology and the labor process. For example, Cynthia Cockburn (1983, 1985) has shown how the introduction of new technology in a number of industries was accompanied by a reorganization, but not abolition, of the gendered division of labor that left the technology in men's control and maintained the definition of skilled work as men's work and unskilled work as women's work.

Second is the construction of symbols and images that explain, express, reinforce, or sometimes oppose those divisions. These have many sources or forms in language, ideology, popular and high culture, dress, the press, television. For example, as Moss Kanter (1975), among others, has noted, the image of the top manager or the business leader is an image of successful, forceful masculinity (see also Lipman-Blumen 1980). In Cockburn's studies, men workers' images of masculinity linked their gender with their technical skills; the possibility that women might also obtain such skills represented a threat to that masculinity.

The third set of processes that produce gendered social structures, including organizations, are interactions between women and men, women and

women, men and men, including all those patterns that enact dominance and submission. For example, conversation analysis shows how gender differences in interruptions, turn taking, and setting the topic of discussion recreate gender inequality in the flow of ordinary talk (West and Zimmerman 1983). Although much of this research has used experimental groups, qualitative accounts of organizational life record the same phenomena: Men are the actors, women the emotional support (Hochschild 1983).

Fourth, these processes help to produce gendered components of individual identity, which may include consciousness of the existence of the other three aspects of gender, such as, in organizations, choice of appropriate work, language use, clothing, and presentation of self as a gendered member of an organization (Reskin and Roos 1987).

Finally, gender is implicated in the fundamental, ongoing processes of creating and conceptualizing social structures. Gender is obviously a basic constitutive element in family and kinship, but, less obviously, it helps to frame the underlying relations of other structures, including complex organizations. Gender is a constitutive element in organizational logic, or the underlying assumptions and practices that construct most contemporary work organizations (Clegg and Dunkerley 1980). Organizational logic appears to be gender neutral; gender-neutral theories of bureaucracy and organizations employ and give expression to this logic. However, underlying both academic theories and practical guides for managers is a gendered substructure that is reproduced daily in practical work activities and, somewhat less frequently, in the writings of organizational theorists. (cf. Smith 1988)

Organizational logic has material forms in written work rules, labor contracts, managerial directives, and other documentary tools for running large organizations, including systems of job evaluation widely used in the comparable-worth strategy of feminists. Job evaluation is accomplished through the use and interpretation of documents that describe jobs and how they are to be evaluated. These documents contain symbolic indicators of structure; the ways that they are interpreted and talked about in the process of job evaluation reveals the underlying organizational logic. I base the following theoretical discussion on my observations of organizational logic in action in the job-evaluation component of a comparable-worth project (Acker 1987, 1989, 1990).

Job evaluation is a management tool used in every industrial country, capitalist and socialist, to rationalize the organizational hierarchy and to help in setting equitable wages (International Labour Office 1986). Although

there are many different systems of job evaluation, the underlying rationales are similar enough so that the observation of one system can provide a window into a common organizational mode of thinking and practice.

In job evaluation, the content of jobs is described and jobs are compared on criteria of knowledge, skill, complexity, effort, and working conditions. The particular system I observed was built incrementally over many years to reflect the assessment of managers about the job components for which they were willing to pay. Thus today this system can be taken as composed of residues of these judgments, which are a set of decision rules that, when followed, reproduce managerial values. But these rules are also the imagery out of which managers construct and reconstruct their organizations. The rules of job evaluation, which help to determine pay differences between jobs, are not simply a compilation of managers' values or sets of beliefs, but are the underlying logic or organization that provides at least part of the blueprint for its structure. Every time that job evaluation is used, that structure is created or reinforced.

Job evaluation evaluates jobs, not their incumbents. The job is the basic unit in a work organization's hierarchy, a description of a set of tasks, competencies, and responsibilities represented as a position on an organizational chart. A job is separate from people. It is an empty slot, a reification that must continually be reconstructed, for positions exist only as scraps of paper until people fill them. The rationale for evaluating jobs as devoid of actual workers reveals further the organizational logic – the intent is to assess the characteristics of the job, not of their incumbents who may vary in skill, industriousness, and commitment. Human beings are to be motivated, managed, and chosen to fit the job. The job exists as a thing apart.

Every job has a place in the hierarchy, another essential element in organizational logic. Hierarchies, like jobs, are devoid of actual workers and based on abstract differentiations. Hierarchy is taken for granted, only its particular form is at issue. Job evaluation is based on the assumption that workers in general see hierarchy as an acceptable principle, and the final test of the evaluation of any particular job is whether its place in the hierarchy looks reasonable. The ranking of jobs within an organization must make sense to managers, but it is also important that most workers accept the ranking as just if the system of evaluation is to contribute to orderly working relationships.

Organizational logic assumes a congruence between responsibility, job complexity, and hierarchical position. For example, a lower-level position, the level of most jobs filled predominantly by women, must have equally low

levels of complexity and responsibility. Complexity and responsibility are defined in terms of managerial and professional tasks. The child-care worker's responsibility for other human beings or the complexity facing the secretary who serves six different, temperamental bosses can only be minimally counted if the congruence between position level, responsibility, and complexity is to be preserved. In addition, the logic holds that two jobs at different hierarchical levels cannot be responsible for the same outcome; as a consequence, for example, tasks delegated to a secretary by a manager will not raise her hierarchical level because such tasks are still his responsibility, even though she has the practical responsibility to see that they are done. Levels of skill, complexity, and responsibility, all used in constructing hierarchy, are conceptualized as existing independently of any concrete worker.

In organizational logic, both jobs and hierarchies are abstract categories that have no occupants, no human bodies, no gender. However, an abstract job can exist, can be transformed into a concrete instance, only if there is a worker. In organizational logic, filling the abstract job is a disembodied worker who exists only for the work. Such a hypothetical worker cannot have other imperatives of existence that impinge upon the job. At the very least, outside imperatives cannot be included within the definition of the job. Too many obligations outside the boundaries of the job would make a worker unsuited for the position. The closest the disembodied worker doing the abstract job comes to a real worker is the male worker whose life centers on his full-time, life-long job, while his wife or another woman takes care of his personal needs and his children. While the realities of life in industrial capitalism never allowed all men to live out this ideal, it was the goal for labor unions and the image of the worker in social and economic theory. The woman worker, assumed to have legitimate obligations other than those required by the job, did not fit with the abstract job.

The concept "a job" is thus implicitly a gendered concept, even though organizational logic presents it as gender neutral. "A job" already contains the gender-based division of labor and the separation between the public and the private sphere. The concept of "a job" assumes a particular gendered organization of domestic life and social production. It is an example of what Dorothy Smith has called "the gender subtext of the rational and impersonal" (1988, 4).

Hierarchies are gendered because they also are constructed on these underlying assumptions: Those who are committed to paid employment are "naturally" more suited to responsibility and authority; those who must

divide their commitments are in the lower ranks. In addition, principles of hierarchy, as exemplified in most existing job-evaluation systems, have been derived from already existing gendered structures. The best-known systems were developed by management consultants working with managers to build methods of consistently evaluating jobs and rationalizing pay and job classifications. For example, all managers with similar levels of responsibility in the firm should have similar pay. Job-evaluation systems were intended to reflect the values of managers and to produce a believable ranking of jobs based on those values. Such rankings would not deviate substantially from rankings already in place that contain gender typing and gender segregation of jobs and the clustering of women workers in the lowest and the worst-paid jobs. The concrete value judgments that constitute conventional job evaluation are designed to replicate such structures (Acker 1989). Replication is achieved in many ways; for example, skills in managing money, more often found in men's than in women's jobs, frequently receive more points than skills in dealing with clients or human relations skills, more often found in women's than in men's jobs (Steinberg and Haignere 1987).

The gender-neutral status of "a job" and of the organizational theories of which it is a part depend upon the assumption that the worker is abstract, disembodied, although in actuality both the concept of "a job" and real workers are deeply gendered and "bodied." Carole Pateman (1986), in a discussion of women and political theory, similarly points out that the most fundamental abstraction in the concept of liberal individualism is "the abstraction of the 'individual' from the body. In order for the individual to appear in liberal theory as a universal figure, who represents anyone and everyone, the individual must be disembodied" (p. 8). If the individual were not abstracted from bodily attributes, it would be clear that the individual represents one sex and one gender, not a universal being. The political fiction of the universal "individual" or "citizen," fundamental to ideas of democracy and contract, excluded women, judging them lacking in the capacities necessary for participation in civil society. Although women now have the rights of citizens in democratic states, they still stand in an ambiguous relationship to the universal individual who is "constructed from a male body so that his identity is always masculine" (Pateman 1988, 223). The worker with "a job" is the same universal "individual" who in actual social reality is a man. The concept of a universal worker excludes and marginalizes women who cannot, almost by definition, achieve the qualities of a real worker because to do so is to become like a man.

ORGANIZATIONAL CONTROL, GENDER, AND THE BODY

The abstract, bodiless worker, who occupies the abstract, gender-neutral job has no sexuality, no emotions, and does not procreate. The absence of sexuality, emotionality, and procreation in organizational logic and organizational theory is an additional element that both obscures and helps to reproduce the underlying gender relations.

New work on sexuality in organizations (Hearn and Parkin 1987), often indebted to Foucault (1979), suggests that this silence on sexuality may have historical roots in the development of large, all-male organizations that are the primary locations of societal power (Connell 1987). The history of modern organizations includes, among other processes, the suppression of sexuality in the interests of organization and the conceptual exclusion of the body as a concrete living whole (Burrell 1984, 1987; Hearn and Parkin 1987; Morgan 1986).

In a review of historical evidence on sexuality in early modern organizations, Burrell (1984, 98) suggests that "the suppression of sexuality is one of the first tasks the bureaucracy sets itself." Long before the emergence of the very large factory of the nineteenth century, other large organizations, such as armies and monasteries, which had allowed certain kinds of limited participation of women, were more and more excluding women and attempting to banish sexuality in the interests of control of members and the organization's activities (Burrell 1984, 1987; Hacker and Hacker 1987). Active sexuality was the enemy of orderly procedures, and excluding women from certain areas of activity may have been, at least in part, a way to control sexuality. As Burrell (1984) points out, the exclusion of women did not eliminate homosexuality, which has always been an element in the life of large all-male organizations, particularly if members spend all of their time in the organization. Insistence on heterosexuality or celibacy were ways to control homosexuality. But heterosexuality had to be practiced outside the organization, whether it was an army or a capitalist workplace. Thus the attempts to banish sexuality from the workplace were part of the wider process that differentiated the home, the location of legitimate sexual activity, from the place of capitalist production. The concept of the disembodied job symbolizes this separation of work and sexuality.

Similarly, there is no place within the disembodied job or the gender-neutral organization for other "bodied" processes, such as human reproduction (Rothman 1989) or the free expression of emotions (Hochschild 1983).

Sexuality, procreation, and emotions all intrude upon and disrupt the ideal functioning of the organization, which tries to control such interferences. However, as argued above, the abstract worker is actually a man, and it is the man's body, its sexuality, minimal responsibility in procreation, and conventional control of emotions that pervades work and organizational processes. Women's bodies – female sexuality, their ability to procreate and their pregnancy, breast-feeding, and child care, menstruation, and mythic "emotionality" – are suspect, stigmatized, and used as grounds for control and exclusion.

The ranking of women's jobs is often justified on the basis of women's identification with childbearing and domestic life. They are devalued because women are assumed to be unable to conform to the demands of the abstract job. Gender segregation at work is also sometimes openly justified by the necessity to control sexuality, and women may be barred from types of work, such as skilled blue-collar work or top management, where most workers are men, on the grounds that potentially disruptive sexual liaisons should be avoided (Lorber 1984). On the other hand, the gendered definition of some jobs "includes sexualization of the woman worker as a part of the job" (MacKinnon 1979, 18). These are often jobs that serve men, such as secretaries, or a largely male public (Hochschild 1983).

The maintenance of gendered hierarchy is achieved partly through such often-tacit controls based on arguments about women's reproduction, emotionality, and sexuality, helping to legitimate the organizational structures created through abstract, intellectualized techniques. More overt controls, such as sexual harassment, relegating childbearing women to lower-level mobility tracks, and penalizing (or rewarding) their emotion management also conform to and reinforce hierarchy. MacKinnon (1979), on the basis of an extensive analysis of legal cases, argues that the willingness to tolerate sexual harassment is often a condition of the job, both a consequence and a cause of gender hierarchy.

While women's bodies are ruled out of order, or sexualized and objectified, in work organizations, men's bodies are not. Indeed, male sexual imagery pervades organizational metaphors and language, helping to give form to work activities (see Hearn and Parkin 1987, for an extended discussion). For example, the military and the male world of sports are considered valuable training for organizational success and provide images for teamwork, campaigns, and tough competition. The symbolic expression of male sexuality may be used as a means of control over male workers, too, allowed or even encouraged within the bounds of the work situation to create cohesion or alleviate stress (Collinson 1988; Hearn and Parkin 1987). Management approval of pornographic pictures in the locker room or support for all-male

work and play groups where casual talk is about sexual exploits or sports are examples. These symbolic expressions of male dominance also act as significant controls over women in work organizations because they are per se excluded from the informal bonding men produce with the "body talk" of sex and sports.

Symbolically, a certain kind of male heterosexual sexuality plays an important part in legitimating organizational power. Connell (1987) calls this hegemonic masculinity, emphasizing that it is formed around dominance over women and in opposition to other masculinities, although its exact content changes as historical conditions change. Currently, hegemonic masculinity is typified by the image of the strong, technically competent, authoritative leader who is sexually potent and attractive, has a family, and has his emotions under control. Images of male sexual function and patriarchal paternalism may also be embedded in notions of what the manager does when he leads his organization (Calas and Smircich 1989). Women's bodies cannot be adapted to hegemonic masculinity; to function at the top of male hierarchies requires that women render irrelevant everything that makes them women.

The image of the masculine organizational leader could be expanded, without altering its basic elements, to include other qualities also needed, according to many management experts, in contemporary organizations, such as flexibility and sensitivity to the capacities and needs of subordinates. Such qualities are not necessarily the symbolic monopoly of women. For example, the wise and experienced coach is empathetic and supportive to his individual players and flexibly leads his team against devious opposition tactics to victory.

The connections between organizational power and men's sexuality may be even more deeply embedded in organizational processes. Sally Hacker (1989) argues that eroticism and technology have common roots in human sensual pleasure and that for the engineer or the skilled worker, and probably for many other kinds of workers, there is a powerful erotic element in work processes. The pleasures of technology, Hacker continues, become harnessed to domination, and passion becomes directed toward power over nature, the machine, and other people, particularly women, in the work hierarchy. Hacker believes that men lose a great deal in this transformation of the erotic into domination, but they also win in other ways. For example, many men gain economically from the organizational gender hierarchy. As Crompton and Jones (1984) point out, men's career opportunities in white-collar work depend on the barriers that deny those opportunities to women. If the mass

of female clerical workers were able to compete with men in such work, promotion probabilities for men would be drastically reduced.

Class relations as well as gender relations are reproduced in organizations. Critical, but nonfeminist, perspectives on work organizations argue that rational-technical systems for organizing work, such as job classification and evaluation systems and detailed specification of how work is to be done, are parts of pervasive systems of control that help to maintain class relations (Edwards 1979). The abstract "job," devoid of a human body, is a basic unit in such systems of control. The positing of a job as an abstract category, separate from the worker, is an essential move in creating jobs as mechanisms of compulsion and control over work processes. Rational-technical, ostensibly gender-neutral, control systems are built upon and conceal a gendered substructure (Smith 1988) in which men's bodies fill the abstract jobs. Use of such abstract systems continually reproduces the underlying gender assumptions and the subordinated or excluded place of women. Gender processes, including the manipulation and management of women's and men's sexuality, procreation, and emotion, are part of the control processes of organizations, maintaining not only gender stratification but contributing also to maintaining class and, possibly, race and ethnic relations. Is the abstract worker white as well as male? Are white-male-dominated organizations also built on underlying assumptions about the proper place of people with different skin colors? Are racial differences produced by organizational practices as gender differences are?

CONCLUSION

Feminists wanting to theorize about organizations face a difficult task because of the deeply embedded gendering of both organizational processes and theory. Commonsense notions, such as jobs and positions, which constitute the units managers use in making organizations and some theorists use in making theory, are posited upon the prior exclusion of women. This underlying construction of a way of thinking is not simply an error, but part of processes of organization. This exclusion in turn creates fundamental inadequacies in theorizing about gender-neutral systems of positions to be filled. Creating more adequate theory may come only as organizations are transformed in ways that dissolve the concept of the abstract job and restore the absent female body.

Such a transformation would be radical in practice because it would probably require the end of organizations as they exist today, along with a

redefinition of work and work relations. The rhythm and timing of work would be adapted to the rhythms of life outside of work. Caring work would be just as important and well rewarded as any other; having a baby or taking care of a sick mother would be as valued as making an automobile or designing computer software. Hierarchy would be abolished, and workers would run things themselves. Of course, women and men would share equally in different kinds of work. Perhaps there would be some communal or collective form of organization where work and intimate relations are closely related, children learn in places close to working adults, and workmates, lovers, and friends are all part of the same group. Utopian writers and experimenters have left us many possible models (Hacker 1989). But this brief listing begs many questions, perhaps the most important of which is how, given the present organization of economy and technology and the pervasive and powerful, impersonal, textually mediated relations of ruling (Smith 1988), so radical a change could come about.

Feminist research and theorizing, by continuing to puzzle out how gender provides the subtext for arrangements of subordination, can make some contributions to a future in which collective action to do what needs doing – producing goods, caring for people, disposing of the garbage – is organized so that dominance, control, and subordination, particularly the subordination of women, are eradicated, or at least minimized, in our organization life.

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3

TECHNOLOGY AND THE REDESIGN OF WORK IN THE INSURANCE INDUSTRY

E. APPELBAUM

E. Appelbaum, 'Technology and the redesign of work in the insurance industry', in *Women, Work, and Technology*, eds B.D. Wright, M.M. Ferree, G.O. Mellow, L.H. Lewis, M.D. Samper, R. Asher & K. Claspell, University of Michigan Press, Ann Arbor, 1987, pp. 182–201.

Financial corporations in the United States are undergoing a rapid transformation as a result of the convergence of three powerful forces for change: high and volatile interest rates, rapid deregulation, and the diffusion and systematic application of computer and information technologies. The interaction of these forces is presenting financial corporations with the impetus to create new products and to alter the production process. While the consequences of these changes are just emerging, it is already apparent that major adjustments in the work force of the financial sector will be required.

The insurance industry is a case in point. Automation began in this industry around 1960 with the introduction of mainframe computers to handle customer billing and to provide management with detailed and timely accounting data. The carriers established data processing centers physically separated from other insurance operations. Employment of professional and clerical workers increased as these centers were staffed, while jobs elsewhere in the firms were largely unaffected. The automation of routine underwriting and rating procedures, which began in the 1970s, at first also involved the computerization of discrete tasks. Some underwriting and rating functions were transformed, but initially automation meant the transfer of codified knowledge from a set of manuals to a computer program. The work process was largely unaffected and, despite the capabilities of the technology, an insurance application continued to pass routinely through five or more hands before a policy was issued. Not until the financial environment was radically altered by the doubling of the inflation rate and the associated increase in interest rates in the 1970s did the industry begin to exploit the capabilities of computer and information technologies to develop new products and to experiment with the redesign of jobs and the reorganization of work. Driven by market forces and the capabilities of new technologies, changes in the work process began in earnest in 1979.

This study investigates the nature of these changes and their implications for the insurance industry work force. The findings are likely to have application far beyond the insurance industry. Nearly half the U.S.

labor force works in an office. "Information workers"—managers, technical/professional, clerical, and sales personnel—currently comprise 53 percent of the labor force. Clerical workers alone represent nearly one-fifth of all workers. Office automation and other information technologies are permanently altering the nature of white-collar and pink-collar work. The insurance industry is on the cutting edge of these developments. The effects of technology on the nature of work in the insurance industry may very well signal the future direction of change in office work acrosss the U.S. economy.

Study Approach

This investigation of adjustments in the insurance industry work force focuses on several important dimensions of change: the effect on the number of jobs, the distribution of occupations, the level of skills, the nature of clerical work, and the opportunities for upward mobility. Two major issues considered in this paper are the implications of these changes for women workers and for education.

The salient features of both the economic environment and the automation technologies are described in the next two sections. While this is a necessary beginning point for evaluating and forecasting the effects of automation on the work force, it is not sufficient; for the impact of new technology depends fundamentally on the way in which it is implemented.

For this reason, aggregate data available from the U.S. Department of Labor and a careful study of the specialized literatures on the various segments of the insurance industry as well as on office automation were supplemented with on-site visits and interviews at a small number of insurance carriers and agencies. Executives responsible for the implementation of new technology and for the design (or redesign) of jobs were interviewed. The vice-president for human resource development was interviewed at every carrier and, where appropriate, the vice-president for technical systems was interviewed as well. At one carrier, in which automation of the sales force was the major technological priority, the assistant vice-president for personal lines marketing, who had been charged with developing the software and training the agents, was also interviewed. Interviews at agencies were conducted with the president of the agency as well as with agents and clerical staff.

In all, interviews were conducted at six carriers and two independent agencies. Two of the carriers are in the life/health segment of the industry, three are in the property/casualty segment, and one sells per-

sonal lines (life, health, auto, homeowner's, accident) as well as group health. Four of the companies sell their products through independent agents, one has a captive agency sales force, and one is a direct writer using mail, television, and other forms of direct solicitation to sell its products without a sales force. Assets at the carriers varied from $60 billion down to $0.2 billion. The sample, while small, is representative of the range of firms in the industry. These interviews, together with aggregate employment data and published descriptions of the technologies provide the basis for the remaining sections of the article.

Economic Environment

Interest rates doubled in the course of the 1960s and nearly doubled again in the 1970s, reaching double-digit levels by the end of the decade. Financial markets encountered difficulty performing well in these circumstances. Rising and increasingly volatile interest rates fueled a wave of financial innovation and deregulation as financial institutions sought to develop strategies for coping with the economic environment. "Financial institutions pushed out in all directions, and financial practices became highly flexible as financial deregulation proliferated both in fact and in formal law" (Sametz 1984, 8). Competition developed among large financial institutions whose functions and operations had been segregated by law since the 1930s.

Rising interest rates had a marked effect on the insurance industry, which depends primarily upon investment returns, not underwriting, for its overall profit. Traditionally, insurance carriers were major participants in the capital markets as they matched the maturities of their portfolios to expected claims. Inflation in the late 1970s resulted in negative yields on long-term assets, however, and encouraged insurance companies to find ways around regulatory standards on investment. Turbulence in financial markets increased the risks involved but also raised the possibility of large payoffs for carriers whose investment managers outperformed the market. The large cash flow characteristic of the industry, and the possibility of high returns, attracted new entrants. Increased competition in all segments of the industry drove down the price of insurance. Average premiums per $1,000 of coverage dropped sharply.

For property/casualty firms the late 1970s were a period of high profits; following the initial adjustment to an inflationary regime, however, competition dangerously narrowed the margin between premium income and the cost of writing policies on commercial risks and also eroded the market share of some established carriers. Carriers turned to

technology to reduce costs and to improve margins and regain market position.

For carriers in the life/health segment of the industry adjustment to inflation was more difficult. Whole life, the industry's predominant product, combines insurance with a savings plan yielding a 4 to 6 percent return. With interest rates on competing savings instruments rising, the ability of life insurance products to attract savings declined. Sales of term insurance increased, but since term is much cheaper than whole life, premiums stagnated. Life insurance companies were under pressure to develop new products.

Variable annuities were developed during the 1960s. Variable life was proposed in 1972 and approved by the Securities and Exchange Commission in 1976. Both are based on a portfolio of common stock and pay benefits that are not guaranteed but are contingent on the actual performance of the portfolio. Universal life, introduced in 1979, splits the premium and allows the consumer to decide how much goes to the death benefit and how much to savings. As with variable life, the premiums are placed in separate accounts and invested in securities whose returns are more sensitive to market rates of interest. Not until 1983, when carriers began providing their sales forces with computers and software capable of calculating death benefits and cash value under a variety of interest rate projections and with the premium split in different ways, did these so-called new wave policies become significant. Universal life accounted for 18 percent of new premium income in 1983 ("Upheaval in life insurance" 1984, 61). Life insurance companies have had to upgrade their computer systems and retrain their sales forces in order to sell these products. Moreover, competition from financial supermarkets not dependent on agents who collect commissions has created pressure on life insurance companies to use technology to upgrade the productivity of their traditional distribution system.

Office and Information Technologies

The production process in the insurance industry was rationalized decades before the introduction of office automation. Jobs were fragmented and functionally specialized, and paper wended its way around the office floor as surely as if it were on an assembly line. Introduction of the mainframe computer into the industry in the 1960s left this process largely untouched.

Computers at first were used to process routine or repetitive transactions. Mainly, they were used to keep track of and process all premium transactions. Claims disbursements were also automated early.

In addition, the computer was used from the beginning to generate the numerous reports needed by the accounting department. Separate electronic data processing departments were established. The resulting growth of computer specialists and operations research personnel contributed to the increase in professional employees during the 1960s, while keypunch operators and computer operators increased the number of clerical workers.

In the 1970s the capabilities of the central computer were used to support the underwriting aspects of the insurance business. The technology allowed underwriters at field or central offices to accept applications. If accepted, the application would undergo overnight processing by the computer, which would also calculate the premium. The output would then be mailed from central processing to the field office or printed via remote printer. In addition to processing applications, the computer could generate activity reports for field offices.

To implement the technology, programmers translated the manual processing procedures into programs. Decision algorithms were incorporated into the programs, systematizing the decision-making process for underwriters. In the early period, underwriters still had to make judgments. Now, however, personal lines underwriting rarely requires decisions that are not machine generated, and the computerization of underwriting for small or routine commercial risks is proceeding. At some carriers, low-level underwriting functions have been assigned to newly created clerical positions. Moreover, as underwriting jobs have been systematized, women have been hired into them.

Access to computer programs for underwriters is provided through telephone lines and cathode-ray tubes (CRTs). Initially, use of this technology required substantial clerical staff to code information and type attachments as well as to assemble and mail the policy packages. Currently, policies are entered on-line as they are issued, and word processing handles the attachments. Routine keyboarding is declining.

Electronic typewriters and word processing equipment spread rapidly in insurance offices in the 1970s. Electronic sorting of incoming mail, document control, electronic filing, and electronic mail are other important technologies in use in insurance. On-line processing of policies and optical character recognition (OCR) techniques adopted over the last decade have reduced the need to code information on worksheets and to keypunch it into the computer. Substantial savings in labor time in routine clerical work have already been achieved.

The next stage of office automation is integrated information processing, in which components that do word and data processing are linked through high-speed communications networks. These systems are

used to support both clerical and decision-making functions. Important problems have slowed the adoption of this technology in insurance offices. These include high cost, the expectation of future improvements, and unresolved questions of access to and responsibility for central files.

Software is currently being developed to provide the on-line data and information services essential for middle and senior management and for professional staff. There are two aspects to the required technology: an appropriate data base and data base technology, and terminals or small computers capable of transparent interface with the central computer, other terminals, and a variety of peripherals. Data base management systems are now being developed and implemented. Since the batch-oriented accounting support systems already in place do not lend themselves readily to the demands of the decision support system, firms face difficult and expensive choices. The technology is expected to improve the performance of managers, but it has run into difficulty being accepted. The issue is not reluctance to use a keyboard per se, but more general complaints about access methodology. Managers complain that with existing menu-based keyboard systems, the personal time and effort required to get into the system are too great in terms of what can be gotten out of it. For the present, professional support staff are increasing as some companies establish separate programming staff responsive to the needs of managers.

Cost-effective software services are being made available to property claim departments. These include computerization of automobile and property claim estimates as well as damageability and management report information. Computerization does not yet extend much beyond auto, though other personal lines and worker's compensation claims are being automated. Computerization automatically captures all estimate information without duplicate keypunching. Data can then be summarized into management reports and used to improve the efficiency of the claims management operation. Linking the claims data base to other data bases will also allow insurers to predict claim frequency and to estimate loss ratios.

Carriers are actively engaged in automating the sales force. Although some agencies have used microcomputers for several years, the cost proved difficult for most to justify. Originally it was believed that the expense of computerizing agencies would not be warranted without interface between agents and carriers. In the last year, however, the carriers have recognized the importance of computerization in improving agents' productivity. Moreover, new wave life policies cannot be marketed without the high-speed calculating capability of the computer. As a result, some carriers are currently helping their high-volume agents

obtain sophisticated equipment and specialized software, either providing them outright or subsidizing their purchase. The computer is used mainly to prepare sales proposals or to expand and focus marketing efforts. A few carriers have established interface with a small number of high-volume agents, enabling them to underwrite, rate, and issue policies directly. Independent agencies that do not produce a volume of business high enough to warrant computerization by the carrier have established a common network to interface with agencies that have this capability.

Technologically advanced firms have targeted the distribution system and the management function for cost cutting via technology during the remainder of the 1980s. Interest in networks that allow otherwise noncompatible machines to interact is high, but implementation of the paperless electronic office is a low priority for most carriers.

The Redesign of Jobs

An important insight that has emerged after several years of experience with office technologies is that the technologies used to automate clerical, underwriting, and processing functions differ fundamentally from older industrial technologies. The management of office automation must likewise differ. The logic of scientific management in a factory setting meant that work was rationalized and fragmented as it was automated. Productivity increased, but in the process worker skills were devalued, tasks became repetitive, and a sense of responsibility for the company's product was diminished. When automation was first introduced into an office environment, the same logic prevailed. In the insurance industry, where work had long since been fragmented, computerization was applied to discrete tasks. Skill levels tended to decline and the automated tasks were routine and repetitive.

As experience with office automation increases, however, it appears that in contrast to earlier factory automation, computer and communication technologies are often most effective in reducing costs when control, communication, and decision making are decentralized and when hierarchic organization and the functional specialization of tasks are reduced. Recent applications of these technologies have involved the elimination of both low-skill clerical and routine technical and professional jobs, and the creation of new, multiactivity, skilled clerical positions to handle these functions. A less common alternative is to broaden the agent's job by folding routine underwriting and rating functions into it and providing for the printing and issuing of policies at the point of sale. The result has been a significant reduction in unit labor requirements and an increase in

the average skill levels of the remaining clerical, sales, and professional work force. The following examples illustrate the point.

In the property/casualty segment of the industry, competition has driven down premiums on small or unexceptional commercial risks—condominiums, stores, commercial auto, worker's compensation—despite rising costs, thereby substantially reducing the profitability of these lines. One major insurer has developed a strategy that reduces the costs of processing an application and improves the efficiency of its distribution network. The carrier is developing computer programs that assist in underwriting and rating these commercial lines, and agents are being trained to use the programs. The carrier is providing its highest volume, most professional agents (about 10 percent of its sales force) with intelligent terminals linked to its central computer. The terminals are also linked to printers capable of issuing a policy at the point of sale.

When the procedures are fully implemented, all clerical processing will be eliminated for sales generated by these agents. Policy typist, rater, and underwriter's assistant—jobs that provided career paths from clerical to lower-level professional jobs as underwriters—are disappearing. In fact, the lower-level jobs as insurance professionals are rapidly declining as well. Jobs for the most skilled underwriters remain, but the jobs have changed. Skilled underwriters no longer manage risk, they manage agents. They oversee the agent's "book of business," assessing the agent's success at underwriting, offering advice, developing customer profiles, focusing marketing efforts, ensuring the professionalism of the agency—and encouraging the agent to do a volume of business that warrants the carrier's investment. A few of the displaced clerical workers are being retrained and given basic programming and troubleshooting skills in order to provide technical support to agents using computer terminals. But most of the traditional clerical and professional functions previously involved in accepting or rejecting an application and in issuing a policy will be performed by the agent.

A very different example is provided by the carrier that sells personal lines insurance. These products are standardized and can be mass marketed without agents through direct mail and television solicitation. Direct writers, as they are called, are the most profitable and most rapidly growing carriers. New companies have entered this market, undercutting existing firms and causing wide swings in market share. One established company, which experienced a sudden drop in market share in 1980, had previously automated mail handling and filing, thus eliminating nearly all unskilled clerical jobs. Policies were entered online, and the system could handle inquiries for current information about coverage immediately. The work process was extremely frag-

mented, however, to the extent that customer inquiries were answered by different people with different job titles depending on whether they came by mail or telephone.

The first step taken when business declined was to integrate some of the tasks to facilitate reductions in staff. This first round of integration made no use of computer technology. But by 1983, information technologies had been used to create highly integrated multiactivity jobs in the operations area. Since the company's products were standardized, underwriting and rating functions could be entirely computerized and those jobs eliminated. Instead of these positions, a new highly skilled clerical position has been designed. Customer service representatives handle sales, access the computer program that assesses risk, access the rating program, explain rating procedures to customers, answer customer questions, and respond to complaints by telephone or mail.

Thus the company responded to the loss of business and the need to "skinny down" by a change in job design. Success is apparent in the fact that by 1983 the company was again doing its 1979 volume of business, but with half the number of employees.

Skill Levels and Upward Mobility

Job redesign has included both the integration of tasks into multidimensional jobs and the elimination of the lowest-level clerical and less skilled professional jobs. The resulting configuration of jobs varies from firm to firm, but in every case job categories have become more abruptly segmented while the avenues of mobility between them have been sharply reduced. Many of the newly created jobs are characterized by few opportunities for the exercise of judgment and increased managerial control over the pace and content of work as compared with the professional jobs they replace. Yet these very jobs are less fragmented, less centralized, involve considerable training, and often require significant knowledge of the product.

The effects of automation on skills in the insurance industry vary from carrier to carrier. It can be said, however, that the new techniques neither eliminate skilled workers nor reduce required skills to the barest minimum. The clerical jobs that remain fall into two categories: routine keyboarding (text or data entry, accessing of underwriting and rating programs) and skilled positions (customer service representative, claims representative, secretary). Routine keyboarding is decreasing in importance as office technology continues to advance and as work is reorganized so that sales are entered on-line. Skilled clerical work continues to increase, however, as the more routine aspects of professional work are

automated and become part of the clerical function. The requirements for skilled clerical work are high general literacy, good verbal communication, and an aptitude for arithmetic, but not specific business or insurance skills.

The remaining professional jobs—exceptions or special risks underwriters, lawyers, electronic data processing professionals, actuaries, financial managers—require years of formal training in insurance or other disciplines. As a result of the automation of underwriting and claims estimating for standardized insurance products, career ladders from skilled clerical to insurance professional positions have been eliminated. The gap between the skills of clerical workers and those of professionals has widened despite the elimination of unskilled clerical work such as sorting mail and much filing, and the reduction of routine keyboarding. Skill requirements for clerical workers have increased at the same time that the jobs have become overwhelmingly dead-end.

The effect has been to eliminate a range of middle-level jobs within this industry and to close off avenues of upward mobility for those in clerical occupations. Male clerical workers always had opportunities for advancement to insurance professional and managerial positions. But until the 1970s women were prevented from advancing by the sex segregation of occupations; underwriters, managers, and even clerical supervisors and office managers were usually men. Today, partly as the result of successful affirmative action suits against several carriers, sex is a much less effective barrier to mobility. Now it appears that newly opened avenues of advancement from clerical work to professional jobs are being blocked by new structural barriers—the elimination of less skilled professional positions. While the more routine kinds of underwriting are being computerized, credentials necessary for entry into commercial lines and special risk underwriting are increasing. They often include a college degree plus the requirement that the employee obtain professional certification. The gap between the skills required in skilled clerical work and those required in the remaining insurance professional and professional staff positions appears to be unbridgeable in the context of how work is currently being organized. Avenues of mobility that have only recently opened up for women clerical workers are already disappearing.

Thus the introduction of microprocessor-based technologies and the dramatic redesign of jobs is altering the distribution of occupations in insurance. Office automation has wiped out thousands of jobs for low-skilled clerical workers, created new jobs for skilled clerical workers, and eliminated many professional jobs that comprised the middle of the occupational distribution—and that used to constitute the rungs of a career ladder by which clerical workers could climb up into more highly

TABLE 1. Insurance Industry Employment, Selected Years

Year (annual average)	Property/ Casualty	Life/ Health	Agencies/ Brokers	Total Insurance
1960	288,700	502,600	207,200	1,008,600
1970	365,800	619,500	288,000	1,273,300
1978	460,600	661,400	392,800	1,514,800
1980	490,500	680,500	454,100	1,625,100
1981	484,400	679,600	457,500	1,621,500
1982	472,100	680,900	475,500	1,628,500
Period	**Percent Change in Employment (annual average)**			
1960–70	2.7	2.3	3.9	2.6
1970–78	3.2	0.9	4.6	2.4
1978–81	1.7	0.9	5.5	2.5
1980–82	−1.9	0.0	2.9	0.1

Sources: U.S. Department of Labor, *Employment and Earnings, United States, 1909–1978* (Washington, D.C.: GPO); U.S. Department of Labor, *Employment and Earnings*, table B-2, Mar. issue, various years.

Note: Figures do not include insurance industry labor force employed in real estate offices, stock brokerage houses, etc. (approximately 6 percent of the industry labor force, but increasing).

skilled professional jobs. Declines in unskilled clerical jobs have limited the entry-level job opportunities for minority and working-class women. What is more, the opportunities for advancement by even the more highly skilled clerical workers are being closed. The bottom and the middle of the occupational distribution are both shrinking in the insurance industry.

Changes in Employment and Occupations

The introduction of automation in the 1960s, characterized by the use of mainframe computers, did not discourage employment growth at carriers. Property/casualty firms experienced average annual employment growth of 2.7 percent through the decade (table 1). Job growth was paced by rapid increases in the numbers of professional/technical and clerical workers (table 2).

Not until the 1970s—when the costs of mail sorting and word processing equipment dropped, OCR technology became available, and software to automate most personal lines rating and underwriting was developed—did automation slow the growth of employment. The slowdown was most apparent in the life/health segment of the industry, which

TABLE 2. Insurance Industry Employment by Selected Occupations, 1960, 1970, 1978, and Projected 1990

Occupation	1960		1970		1978		1990	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Managers/Officers	144,000	13.3	160,011	11.8	194,200	12.1	289,663	14.8
Professional/Technical Workers	34,700	3.2	77,773	5.8	96,468	6.0	108,487	5.5
Accountant			24,188	1.8	28,805	1.8	39,762	2.0
Systems analyst			3,833	0.3	5,514	0.3	5,514	0.3
Programmer			11,078	0.8	12,388	0.8	11,580	0.6
Clerical Workers	512,000	47.4	675,427	50.0	730,242	45.4	869,847	44.3
Computer operator			9,751	0.7	21,374	1.3	20,640	1.1
Keypunch operator			24,026	1.8	18,763	1.2	12,278	0.6
Statistical clerk			37,799	2.8	40,214	2.5	40,153	2.1
Bookkeeper			48,099	3.6	44,549	2.8	36,611	1.9
Adjustor, examiner			99,082	7.3	157,354	9.8	227,506	11.6
File clerk			34,185	2.5	27,440	1.7	31,021	1.6
Mail handler			9,334	0.7	8,332	0.5	5,947	0.3
Secretary			178,161	13.2	192,853	12.0	275,433	14.0
Typist			92,472	6.9	81,661	5.1	95,306	4.9
Clerical supervisor			15,134	1.1	16,739	1.0	16,702	0.9
Sales	363,000	33.6	404,846	30.0	555,408	34.5	663,667	33.8
Agents, brokers			403,700	29.9	554,083	34.4	662,828	33.8
Other	29,650	2.7	32,844	2.5	31,488	1.9	30,682	1.6

Sources: U.S. Department of Labor, Bureau of Labor Statistics, *Tomorrow's Manpower Needs*, vol. 2, *National Trends and Outlook: Industry Employment and Occupational Structure*, Bulletin no. 1606 (Washington, D.C.: GPO, 1969); U.S. Department of Labor, *The National Industry-Occupation Employment Matrix, 1970, 1978, and Projected 1990*, vol. 1, Bulletin no. 2086 (Washington, D.C.: GPO, 1981).

deals entirely in personal lines. Employment growth in this segment averaged 0.9 percent per year. In contrast, employment growth at property/casualty carriers, whose business is dominated by commercial risks that are only now being automated, averaged 3.2 percent per year between 1970 and 1978. It slowed to 1.7 percent in the last years of the decade as automation of office clerical and professional work accelerated.

While employment of raters and underwriters is not reported in the National Industry-Occupation Matrix, their numbers appear to have declined. This may have been offset to some extent between 1970 and 1978 by the 120 percent increase in computer operators, a category that includes operators of peripheral equipment such as CRTs (table 2). The spread of word processing equipment and electronic dictating machines is reflected in declines in the absolute numbers of typists and stenographers. The effects of increased on-line processing can be seen in decreases in the numbers of keypunch operators and file clerks. Data for the 1978–81 period are available, though they are not strictly comparable with figures cited in table 2 (U.S. Department of Labor, n.d.). The trends reported in these data are consistent with those reported for the earlier period. Most clerical categories show a relative decline (i.e., in employment share), while some occupations registered absolute declines. These include manual bookkeeping clerks, correspondence clerks, file clerks, and raters as well as typists and stenographers.

Two recent studies look ahead to the years 1990 and 2000 and examine the effect of office automation on employment (Roessner 1984; Leontief and Duchin 1984). Roessner is concerned with the effects of automation on clerical employment in insurance and banking. His study identifies several "breakthrough" technologies with the potential to reshape clerical work, examines their impact on a matrix of clerical tasks and functions, and concludes that the most likely path for clerical employment in insurance is "flat clerical employment through about 1990, then a decline in employment by 2000 to 61 percent of the 1980 level, or from 924,000 to 568,000 employees. . . . At minimum, we foresee *absolute* reductions in clerical employment of 22 percent in insurance . . . by 2000" (Roessner 1984, 26–27).

Leontief and Duchin examine the automation of office operations in business enterprises generally. They consider two scenarios, the more modest of which assumes slower adoption of computer-based workstations and integrated electronic systems. Since integrated electronic systems ("paperless offices") are expected to be slow in penetrating the insurance industry in this decade, the more modest scenario is of greater interest. In the scenario Leontief and Duchin conclude that the number of stenographers, typists, and secretaries required to produce the output

of 1977 with the technology of 1990 will be 85 percent of the 1977 number. For office machine operators it will be 45 percent and for other clerical workers it will be 88 percent. By 2000 the proportions will fall to 76, 15, and 74 percent respectively. While labor requirements per unit of output are falling, the labor force and demand for output are both growing over time. Weighing reductions in unit labor requirements against growth in production, Leontief and Duchin conclude that office employment in the U.S. economy will continue to grow, though they do not report predictions for particular industries such as insurance.

The interviews I conducted with insurance executives suggest that Roesner's conclusion that there will be substantial drops in insurance industry employment is correct. His findings may, however, exaggerate the decline in clerical employment. Cost-cutting strategies at insurance carriers rely heavily on eliminating professional jobs by standardizing more routine professional functions and turning them into skilled clerical work. Thus, some part of the decline in traditional clerical jobs that he identifies may be offset by the creation of new clerical functions. In addition, many carriers expect a shakeout in insurance agencies in which only the larger, more professional ones survive. They anticipate a leaner sales force with fewer agents writing a larger volume of business as automation proceeds.

Finally, the carriers anticipate slow growth or a decline in management ranks. Excessive growth in management and supervisory personnel characterized both the life/health and property/casualty segments of the industry between 1970 and 1978. Reasons for this vary. Some firms, locked into compensation schemes geared to low inflation rates, promoted employees to raise salaries when inflation exploded. Others quietly used "title inflation" to achieve affirmative action promotion goals. Some firms rewarded their professional staff with managerial designations. By 1982 many carriers had succeeded in breaking this promotion cycle. In addition, most carriers set increases in white-collar productivity and the elimination of redundant management ranks as high priorities. The Leontief and Duchin study estimates that increases in productivity of managers as a result of automation, even in the more modest scenario, will allow the 1977 volume of work to be done with 99 percent of the 1977 managers in 1990 and 88 percent by 2000.

Changing Opportunities for Women: Race, Class, and Gender Issues

Shifts in the occupational distribution in the insurance industry have important implications for employment opportunities for women. Women

comprise virtually 100 percent of the employees in clerical occupations in which employment has declined. Because of the high turnover rates in clerical jobs in insurance, reductions in staff were accomplished largely through attrition. Nevertheless, traditional clerical jobs for which noncollege-bound women frequently train while in high school declined by a total of 28,556 positions between 1970 and 1978. At the same time, skilled clerical positions are being penetrated by women and new skilled clerical jobs are being created. Thus, women insurance adjustors, examiners, and investigators (occupations classified as clerical) were 9 percent of total employees in those occupations in 1962, 26 percent of the total in 1971, and 58 percent of the total in 1981 (U.S. Department of Labor 1982). Employment in these occupations increased more than 58,000 between 1970 and 1978, while the percentage of female employees nearly doubled. As a result, the number of women holding such jobs increased by approximately 56,000. Thus the feminization of insurance adjustor, examiner, and investigator occupations more than offset the declines in traditionally female clerical jobs before 1978. These jobs will be affected, however, as the automation of claims procedures progresses.

As a result of both the technological dynamic and the penetration by women of male occupations, the level of skill required of women clerical workers is rising. Insurance companies have adopted several strategies for hiring women with the appropriate skills. These include moving the work from central cities to small towns, suburbs, and rural areas where the work force is mostly white and pay for women is lower. A second strategy firms have followed is to hire college graduates for career clerical positions. Clerical work does not require any specific skills learned in college, not even computer literacy, since computer tasks required in clerical jobs are easily mastered. However, college graduates are hired to ensure that general literacy and the problem-solving requirements of the jobs will be met.

Minority women have only recently penetrated clerical work and are still found mainly in the less skilled clerical jobs. Thus automation is eliminating precisely those jobs in which black women are present in significant numbers. The movement of clerical work to small towns and suburbs and the increased hiring of college-educated women for these jobs also limits opportunities for black women. These developments have a similar negative impact on employment possibilities for less educated urban white working-class women, as well.

The issue of upward mobility is also an important consideration. As argued above, job categories have become more segmented. The gap between skilled clerical and professional employees has grown larger, and jobs that constituted the career path from clerical to professional work

have largely been eliminated. This does not mean that professional, technical, sales, and lower level management jobs are likely to become entirely male again. On the contrary, jobs for college-educated women professionals, and to a lesser extent managers, continue to open up. Women increased from 10 percent of insurance agents, brokers, and underwriters in 1962 to 12 percent in 1971 and 24 percent in 1981 (U.S. Department of Labor 1982). This is reflected in the employment growth of women in the agencies/brokers segment of the industry (table 3), though most of these jobs of course are clerical. In nonclerical jobs, it appears, desegregation will continue. The ongoing recruitment of women as computer programmers, marketing managers, and underwriters is seen by the carriers as obviating the need for promotion of women from clerical to professional or managerial ranks.

Men continue to dominate those departments from which the carriers choose their top managers and executives, namely, finance, marketing, investment, and actuary. But women have been entering professional and lower managerial ranks and can be expected to continue doing so. Some of the specialized occupations within these categories may become majority female, since educated women can be hired more cheaply than similarly qualified men. The result could be lower pay and lower status in those jobs, with the work devalued because it is done by women.

The occupational structure for women in the insurance industry is becoming increasingly two-tiered. It has been observed that the occupational hierarchy is not as gender-segregated as in the past, but occupational stratification occurs increasingly along class and race lines (Baran and Teegarden 1983). Educated white women with the appropriate credentials and class background enter the upper tier as jobs there continue to be desegregated. The vast majority of women in insurance, however, are relegated to totally segregated clerical jobs. Technology is eliminating the least skilled of these, but literate clerical workers, especially if they are white, will find their situation essentially unchanged.

Implications for Education

The combined effects of technology and changes in the economy are placing new demands on the U.S. instructional system. As exemplified by the insurance industry, office automation has raised skill requirements for clerical workers. Employers have made it clear that they want high schools to provide a strong foundation in reading, math, written and verbal communication, and problem-solving skills. Computer literacy is viewed as a less pressing requirement, since the computer skills

TABLE 3. Employment of Women in the Insurance Industry, Selected Years, In Thousands

Year (annual average)	Property/Casualty		Life/Health		Agencies/Brokers		Total	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
1960	165.8	57.4	252.7	50.3	112.2	54.1	530.7	52.6
1970	207.8	56.8	314.7	50.8	158.8	55.1	681.3	53.5
1978	283.4	61.5	371.6	56.2	239.1	60.9	894.1	59.0
1980	308.8	63.0	396.9	58.3	282.1	62.1	987.8	60.8
1982	294.0	62.1	401.3	58.9	301.4	63.4	996.7	61.2

Sources: U.S. Department of Labor, *Employment and Earnings, United States, 1909–1978* (Washington, D.C.: GPO); U.S. Department of Labor, *Employment and Earnings*, tables B-2 and B-3, Mar. issue, various years.

required by nonspecialists can be acquired through company training by workers who have reading and problem-solving capabilities.

Thus automation is blurring the distinction between vocational or commercial education and academic education in secondary schools, as new technology increases the importance of reading and analytical skills for clerical workers. With job content changing as automation progresses, employers want—and workers require—broad occupational preparation as well as specific technology-related vocational skills. A broad education is essential because it increases individual career choices, provides a foundation for learning new skills, and allows an individual to adjust effectively to a job change or a change in the work environment. These are qualities workers need in order to deal with likely future changes in skill requirements in office industries.

Specific vocational skills related to current office technologies which are useful for business students are word processing, data processing, electronic mail handling, and electronic records management. It should be noted, however, that the insurance industry has a long history of providing company- and industry-sponsored training programs to teach specific vocational skills (including word processing, telephone speaking skills, even use of BASIC), as well as insurance concepts and procedures, to workers who require them. As unskilled clerical and routine keyboarding jobs decline, the proportion of workers requiring such training is increasing. Carriers are stepping up their training and retraining programs, and industry-wide educational organizations are responding by developing new courses. Employers' primary concern, therefore, is to hire workers who will be successful in these training and educational programs and for whom training costs can be kept to a minimum.

Women need college degrees to enter professional jobs now that the jobs that once constituted internal career ladders are declining. Opportunities for college education need to be made more generally available. Inner-city high schools need the resources to prepare students for entrance into degree programs. Otherwise the desegregation of occupations by gender will mask an equally invidious exclusion of inner-city women, especially black women, from these jobs.

The need for increased emphasis on training in mathematics for women is also apparent. Arithmetic as well as problem-solving and analytical skills are necessary in both clerical and professional jobs. Moreover, women need advanced training in mathematics in order to enter top professions (for example, actuary, operations researcher, or financial manager in insurance), from which the upper ranks of corporate management are often filled.

By shifting the occupational distribution toward skilled clerical and highly trained professional jobs, office automation is challenging the educational system to design instructional programs that provide a sound foundation in basic skills for all students and that prepare high school graduates for a lifetime of continuing education, either in college, other postsecondary schools, or industry-based instructional programs. The educational establishment is also being asked to develop programs to meet the newly emerging lifelong need for education for those in the labor force.

The capacity of the educational system to meet these requirements is in doubt. Funding of public secondary and higher education is inadequate to enable educators to design and deliver instructional programs that will significantly broaden and improve basic education, especially when the needs of workers in other industries that require scientific education and technical training or proficiency in a foreign language and a knowledge of history and culture are also taken into consideration. Educational goals continually run into resource constraints, a situation that can only be reversed by a change in national priorities.

Conclusion

Automation is changing the job opportunities for clerical workers. In the insurance industry it has eliminated thousands of traditional clerical jobs for file clerks, data entry clerks, typists, bookkeepers, stenographers, and mail handlers. At the same time, women have penetrated previously male clerical jobs such as insurance examiner, adjustor, and investigator while automation has created new skilled clerical jobs such as underwriter's assistant and customer service representative, which are filled mainly by women. The result is an increase in the skill levels of clerical workers.

Automation has also reduced the upward mobility of clerical workers who want to move from skilled clerical to professional positions. This has happened because the routine aspects of professional work have been automated and folded into clerical jobs, and lower-level professional jobs have been eliminated. These jobs used to serve as a career ladder for clerical workers. Declines in unskilled clerical jobs have limited the entry-level job opportunities for minority and working-class women while opportunities for advancement even by skilled clerical workers are also being closed.

Women constitute 61 percent of the insurance industry's current labor force and nearly 100 percent of the workers in traditional clerical jobs. Educational systems have a key role to play in preparing those

women workers who are most affected by automation for remaining employment opportunities. Women must be college educated in order to compete for the remaining professional jobs. They must be literate, with good communication and problem-solving skills, to compete for skilled clerical jobs. Failure to improve the quality of inner-city schools will close off clerical employment for minority and white working-class women.

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4

NEW TECHNOLOGY, TRAINING AND UNION STRATEGIES

H. RAINBIRD

H. Rainbird, 'New technology, training and union strategies', in *New Technology and Industrial Relations*, eds R. Hyman & W. Streeck, Basil Blackwell, Oxford, 1988, pp. 174–88.

As a result of contemporary developments in the labour market it is not always easy to separate union responses to the acquisition of new technology skills from responses to employer demands for greater labour flexibility. In principle they are distinct, but in practice they are interconnected, and flexible working practices have been presented as though they have a technological imperative. As a result, it is often difficult to distinguish managerial policy towards training for new technology (or rather, its absence) and policy towards training for increased flexibility (or its absence). Employers have a degree of choice in the way in which production is organized and jobs designed. In Britain, it has been argued, management pursues one of two strategies: on the one hand, tasks on mass production lines are compartmentalized so that the worker acts as an extension of the machinery, exercising no control over production decisions (cf. Braverman, 1974). On the other hand, in small batch production, workers have retained more autonomy in design decisions because of the greater flexibility of product lines (Friedman, 1977). An outgrowth of the latter concept has been the association of craft skills and labour flexibility with increased worker control over the labour process. Whilst this may have been true in the firms studied by Friedman in the 1970s, the demands placed on workers of all grades to broaden their range of work tasks in the recession of the 1980s may result neither in an upgrading of skills nor an increase in work autonomy.

Trade unions recognize that companies invest in new technology to remain competitive. Their policy is therefore not to resist technological change, but to attempt to control its introduction in seeking agreements on new technology, disclosure of information and job security. In

doing this, a major concern has been to obtain greater involvement in labour force planning, and hence a direct interest in matters relating to training and retraining. The acquisition of new skills and the defence of jobs against deskilling relate directly to conventional union concerns with wages and conditions.

Unions recognize that there are positive and negative effects of new technology on jobs, and invariably stress the need to seek the positive benefits in negotiations. However, there are divergent processes at work. Some workers are enjoying improved conditions of employment, greater job security and, by becoming more flexible and acquiring new skills, arguably becoming more skilled. Others are still employed but are finding their work deskilled and degraded. But undeniably, new technology introduced in the context of industrial restructuring in the recession has been a contributory factor towards massive job losses. This, combined with the casualization of large sectors of the working population through firms' use of part-time, short-term contract and subcontracted labour has resulted in both a degradation of work and a deskilling process through loss of skills at the societal level.

The Concept of Skill

Braverman (1974) argues that the development of the productive forces under capitalism requires constant technical innovation whereby management seeks to extend managerial control over the labour process by separating conception from execution of work. *Labor and Monopoly Capital* has generated debate on the extent to which scientific management techniques result in the deskilling of labour and the degradation of work (see chapter 8). Here, it is useful to refer to Cockburn's study of the printing industry in which she distinguishes between different types of skill. She argues that loss of skill is distinct from degradation of work and also from loss of control. Skill itself is a multi-faceted concept which refers firstly to accumulated experience; secondly, to the skill demanded by a particular job; but thirdly has a political dimension in so far as a group of workers or a union defends its skills against the challenge of the employer or another group of workers (1983: 113). The combination of these three elements can be clearly seen in her examination of the skilled work of the printers.

Discussion of the nature of craft skills must be set alongside the assertion by feminists and general unions that all workers have skills, but they have never been recognized through the wages structure as have been those of skilled craft workers. Phillips and Taylor (1980) argue that the classification of jobs as skilled or semiskilled has more to do with the sex of the worker than the training or ability required to perform them. Employers do indeed differentiate their workforces

by gender and race and this has been documented in the literature on labour market segmentation (e.g. Wilkinson, 1981). Despite this observation, there are real differences in the level of skills demanded by particular jobs which have more to do with the way the job is designed and how the worker is prepared to perform it than with the innate abilities of the worker. There is a fundamental contradiction between the productive potential of human ability and its restriction to specific job tasks in capitalist labour processes which are differentiated by their real and supposed skill content.

When the complexity of the concept is 'unpacked', it is possible to see that there is no contradiction between management's objective of increasing the division of labour and compartmentalizing tasks in the labour process which result in a degradation of work, and the fact that, regardless of whether skills are explicitly rewarded and recognized through job hierarchies and the wages system, workers have accumulated experience and knowledge of work processes which they apply in the execution of their jobs. Whilst managerial strategies of control degrade and deskill work, workers struggle to re-exert control. Since under capitalist relations of production many existing skills are not formally recognized or allowed to develop, there is no reason why new technology labour processes will not be organized around jobs which require formally recognized skills and jobs which, like those required for earlier generations of compartmentalized and degraded work, do not acknowledge the skills and abilities of their occupants.

In the context of the debate on labour flexibility, skills are most likely to receive recognition in the wages structure if unions effectively claim and defend them. The problem is that management may impose new skills on workers and resist acknowledging their existence if training is very short or informal and takes place outside the ambit of union control and initiatives. Lee argues that

> the interesting question . . . is not simply the issue of 'objective' changes in the skill content of jobs brought about by the industrial locus of employment; it also involves the issue of whether worker organization is able to ensure that the new expertise is actually recognized (1982: 154).

Therefore the unions' ability to claim new skills and to obtain formal recognition for them will be fundamental to the redefinition of skilled work.

In a period in which new technology is altering the nature of work and flexible working practices are breaking down established job demarcations, the claiming of new technology skills takes on a significance for unions as organizations. Cockburn distinguishes the individual worker's sense of satisfaction in exercising skill from the meaning it has for organizations representing collective interests. She

argues that whilst there may be collective struggle *over* skill, it may not necessarily be *about* skill, but rather its market value (1983: 121). Nevertheless, in the present context, new technology is undermining the distinctive identity of union organizations by breaking down distinctions between white-collar and blue-collar work, between unskilled and skilled work and between trades. Therefore the claiming of new skills and occupations will be decisive to future developments in the union movement.

Managerial Control and the Degradation of Work

New technology based on microelectronics is characterized by its cheapness and its wide applicability compared to earlier generations of technology (TGWU, 1979). Information technology, in particular, has an enormous capacity to integrate systems and to exercise centralized control over the pace of work and in monitoring performance. This centralization of control cuts out the need for human labour and removes decision-making in many of the jobs that remain. Not only are jobs changed with new technology but the centralization of information allows peaks and troughs in labour demand to be monitored precisely and so allow part-time and temporary labour to be deployed effectively and efficiently. If this information system is linked into robotic controls in warehouses and laser beam checkouts in retail outlets, then the potential for both degrading and deskilling becomes apparent. In interviews, officials in eight major unions with membership in chemicals, engineering and food processing reported the following developments.[1] On part-time working, they commented, 'women are being turned on and off like a bloody tap' and that increasing usage of part-timers revolved around 'the economics of the tea-break'. They were emphatic that jobs are being deskilled:

> You don't need skills to pick up a can of beans and wave it over a laser beam (USDAW).

and

> With robot pickers in warehouses there will still be jobs for USDAW members, but they will be unskilled and low paid, with the physical and often the thinking part taken out. We are concerned with what job will be left after new technology is introduced (USDAW).

Not only does new technology destroy and degrade unskilled and semiskilled work, skills performed by craftsmen are not invulnerable to technological redundancy. Machines introduced in press shops eliminate the need for tool changes, a highly skilled job. A GMB

official went so far as to argue that management strategy is to create stations which require minimal training and, by eradicating work which requires training, to eradicate skill and higher pay. Another strategy to reduce the need to employ skilled people in engineering is by transferring skilled cutting work from the factory to the steel stockholders. In this way, the problem of managerial control, 'man management', is removed from the labour process altogether as the discipline of market competition is imposed on the suppliers. Computer numerically-controlled (CNC) machine tools, whilst enhancing the individual toolmaker's job by taking on part of the design function, decrease the overall demand for skilled toolmakers. 'For the unions, new technology doesn't provide any members. New machine tools don't pay membership dues, attend union meetings, get sick or take holidays' (AEU).

The major means by which managerial control is extended is through new working practices in conjunction with, but independently of, new technology. Occupational flexibility is imposed on all grades of workers from unskilled and semiskilled through to craft workers. Though it can concern only the peripheral areas of skills, there have also been moves towards complete interchangeability of tasks. Employers appear to be seeking 'a general worker philosophy whereby all workers are general and flexible'. GMB officials in the Midlands felt that changes had occurred in jobs and members had taken on new skills without the unions responding properly. This represented a development of flexible attitudes towards changing job definitions and boundaries, which will serve as a preparation for a major assault on craft skills and demarcations at a later stage.

In a period of high unemployment, when workers themselves are under the threat of redundancy, pressures to adopt flexible working practices can be intense:

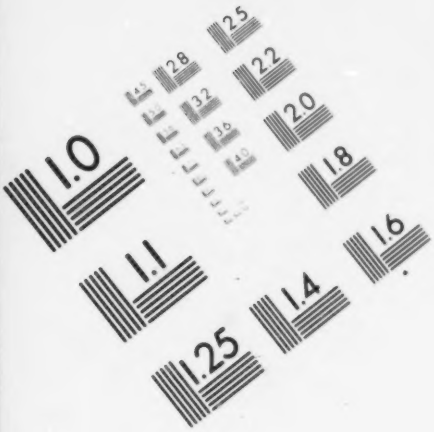
> Companies rely on the fear of the workers that if they don't adapt and exhibit flexible attitudes and abilities of their own innovation then they are ripe for selection for redundancy. Incredible pressure is being placed on those of 45 and 50 who dread what's happening and the indications suggest that older people are accepting menial tasks to avoid being trapped by constant changes of semiskilled jobs. Janitorial jobs are at a premium. . . . At the same time the monotony and boredom of screwdriver assembly work is tremendous because the skills are so watered down (GMB).

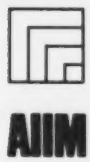
This raises the question of how workers become more flexible and it appears that in many instances the process of learning the skills required for a new job occurs through informal training by one operator training another. This suggests that new skills are being acquired

without the legitimation of a formal training period. Therefore, although the scope of a job is being extended, perhaps even taking on some aspects of semiskilled and skilled work, this is not always rewarded in the wages structure. New skills are being imposed but not recognized.

Failure to recognize new skills not only occurs where training is organized on an informal basis, but also where training is narrow and competence is acquired largely through experience. This has occurred in office work with the acquisition of new technology skills in word processing. Typists are sent on one- and two-day courses run by the manufacturer, which are specific to the machine. APEX advises secretaries undergoing manufacturers' courses in word processing to realize that full competence can only be acquired after 3 to 6 months experience in addition to the introductory course. The union argues that there is a need for formal qualifications in the principles of word processing (i.e. transferable knowledge and skills) and recognizes the weakness of many agreements which were made on new technology in the 1970s which concentrated on job security and pay. In failing to raise issues relating to retraining and job design, many word processor operators have encountered difficulties in obtaining regrading since they cannot demonstrate that their jobs require more skill than previously (APEX, 1980).

An example from the food processing industry of reorganization and investment in new technology indicates how management may fail to recognize the value of skills of a supposedly unskilled workforce. This company decided to close down several processing and packaging plants on one site whilst introducing new bottling, warehousing and production systems. It called for voluntary redundancies whilst offering retention payments for those they wanted to re-employ when the new buildings were opened. However, in their haste to let people go, they lost skills which were essential to production. These skills, though not formally recognized, had been acquired through experience and were based on knowledge of the system, the product and an ability to identify faults in the functioning of production lines. Although the jobs were considered to be semiskilled and requiring manual dexterity rather than diagnostic skills ('the old argument about women having round bottoms and being good at doing a job which requires sitting all day'), the company had to bring back these 'unskilled' women workers who had been made redundant, many of whom had subsequently found alternative employment, to train the new employees. These skills are tacit because, like imposed skills, they are not acknowledged.[2] The example demonstrates that despite management attempts to extend control through the division of labour and the categorization of certain types of work as requiring little or no skill, workers reskill the intellectual and manual content of their jobs autonomously. As Marx commented:





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Association for Information and Image Management

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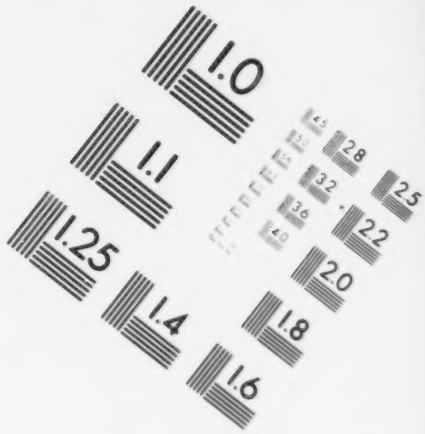
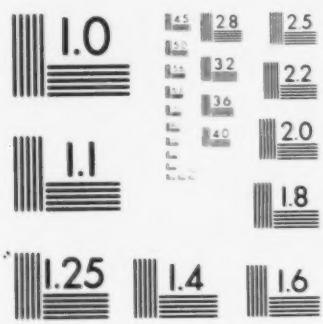
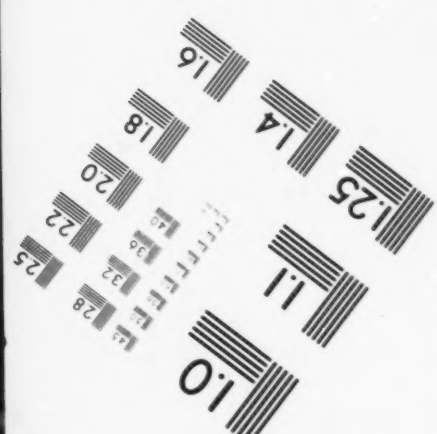
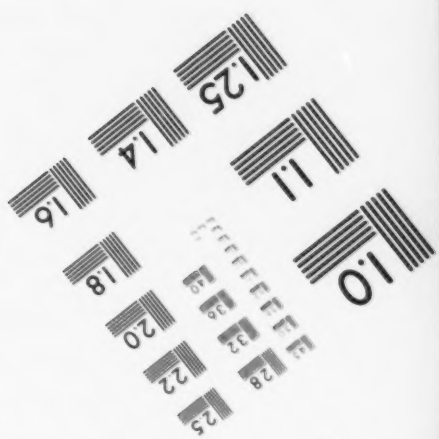
Silver Spring, Maryland 20910

301/587-8202









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> The worker's continual repetition of the same narrowly defined act and the concentration of his attention on it teach him by experience how to attain the desired effect with the minimum of exertion. But since there are always several generations of workers living at one time, and working together at the manufacture of a given article, the technical skill, the tricks of the trade thus acquired, become established, and are accumulated and handed down (1976: 458).

It is precisely this 'untapped energy and skill of . . . workers who have learnt from their own experience' (TGWU, 1979: 5) that quality circles attempt to exploit and which could form a means both of increasing productivity and of dignifying work if workers exercised real control over the labour process.

Skilled Workers and New Technology

If the skills of unskilled and semiskilled workers have often been unacknowledged, then this is not the case for craft workers. Entry to distinctive trades has historically been through time-serving and 'sitting next to Nellie' though since the 1964 Industrial Training Act this has commonly been by means of formal, off-the-job training with courses set up through the Industrial Training Boards.[3] It is amongst craft workers that the political and organizational component of skill has been most apparent, and which has given rise to employers' complaints of inflexibilities. Of course, the unions argue that employers themselves have created inflexibilities through breaking jobs down into their component parts and that the unions simply defend their members' jobs. This becomes a problem for the employer when it appears desirable to change job design again. Whilst employers' demands for labour flexibility are not new, its potential to increase productivity with new technology is enormous.

So what are the implications of increasing flexibility for the skills of craft workers? Firstly, a distinction has to be made between flexibility in peripheral areas of a craft and multiskilling, otherwise known as 'skill exchange' or 'third streaming', whereby the jobs of distinctive crafts are rolled up together so that, for example, an electrician or a fitter could do both jobs. That is to say, that craft skills become interchangeable. The former is widespread and, it could be argued, the general unions and some of the craft unions, who would argue that their members have always been 'all-rounders', would see it as a means of enhancing skills. Whether this or multiskilling enhances skills or reduces them is open to debate. Compared to concessions made on flexibility in peripheral areas of craft skills, the impact of multiskilling is more far-reaching and there is greater dissonance between what it

might mean for the skill content of individual jobs and its consequences for organizational identity. This accounts for the unions' concern for the social cost of the massive increases in productivity and concomitant redundancies that multiskilling will bring about. More importantly, multiskilling opens up a hornet's nest of potential disputes by undermining the distinctive occupational basis of each union. In chemicals,

> technological changes didn't bother us in the past but the new plant is more sophisticated and computer-controlled and has resulted not so much in conflict but in abrasions with other unions which didn't exist before. This is intensified by unemployment and the recession. We are finding inter-union rivalry quite intense in many places and it is severely straining the sense of brotherhood in the movement (AEU).

Whilst not all unions see the spectre of multiskilling on the immediate horizon there are already formal agreements on multiskilling in a number of major companies, though many of these are on greenfield sites (Incomes Data Services, 1986). Moreover, the most astute observers of employer strategy in chemicals consider that concessions on flexibility in the peripheral areas of craft skills have paved the way for major initiatives on multiskilling. So potential conflicts between craft unions are opened up, as between craft unions and general unions, representing process workers.

The unions' views on whether multiskilling results in upgrading or degrading of skills varies but, regardless of its effect on members' jobs, they have an interest in justifying their positions independently of the objective situation in an effort to retain membership and spheres of influence. Nevertheless, the blurring of demarcation lines, and the homogenization of labour raises important issues for the union movement. Firstly, whilst competition for members can increase conflicts between unions, it also makes unity a pressing objective. Therefore, whilst new technology has the potential to open up disputes as traditional boundaries between jobs become blurred, unions can respond by moves towards amalgamation. The latter will be brought about not just by employer initiatives on flexible working practices as outlined above, but also by the technical aspects of new technology, which both proletarianize white-collar work and undermine existing concepts of skilled and unskilled work. Secondly, new technology makes the human element in production increasingly dispensable.

> Old activities are disappearing faster than new ones are generated. We fear that if this is not regulated then the future will be bleak for the job expectations of many people. Job reductions in chemicals have coincided with the highest level of production

ever. This indicates the extent of the problem in accommodating new training. The unions have been remarkably accommodating because their members are being dispossessed, whereas business accepts every advance in technology because it has to compete for markets (AEU).

When unions talk of the 'social cost' of new technology they are normally referring to the cost to their members made redundant, arguing the case for adequate compensation. However, the societal cost of casual work and unemployment for large sectors of the population is not confronted by the sectional interests of the unions.

Claiming New Technology Skills

Apart from defending traditional skills, unions actively claim new technology skills. Given a declining population of union members and a loss of distinctive craft or occupational identities, the claiming of new skills becomes part of a strategy for organizational survival. One of the unions which has made advances in this field is the electricians' union, the EETPU. In a radical departure from previous union practice in Britain, which has been to see the provision of industrial training as the responsibility of the employer, the EETPU sees the provision of training in electronics skills as central to its image as the union for members with new technology skills and as a proponent of the 'new realism' in industrial relations. The jobs of electricians have indeed been affected by the introduction of electronics, especially in maintenance work and in the commissioning of new plant.

In 1980 the EETPU opened its own training school of Cudham Hall, Esher, where short courses in electronics, electronic logic systems, programming and microprocessor interfacing are run. The college also has mobile instructor units so that courses can be provided in plants, and in 1985 the union extended its training facilities to regional offices. There are advantages to members if they can increase their bargaining power by upgrading their skills and hence their employability by attending. Whilst other unions have continued to take the view that training is the responsibility of the employer, the AEU and the craft sector of TASS are now also involved in organizing electronics courses for their members.

As yet the EETPU is the only union to have an internal training representative structure on a par with the health and safety representative structure. The purpose of this structure is not just to raise awareness amongst members for the need to acquire new technology skills:

Training representatives would encourage the better use of

manpower availability, avoid deskilling, promote youth training, adult training and retraining.

> Training representatives would promote the policies of the EETPU in new technology and industrial training, further expand our powers of influence to existing and potential members and provide a marketing force for our own technical training facilities (EETPU *Training Bulletin*, March 1983, p. 8).

For the EETPU, training in new technology skills stakes a claim to the skilled work of the future and constitutes a means of expanding influence amongst other craft workers. The strategy of TASS, another union with claims to high technology skills based on its membership in drawing offices and amongst technicians, is to expand through amalgamation with craft unions: the rationale being new technology's capacity to break down the barriers between craft and white-collar work. This has led to a massive expansion in membership, and although amalgamation with the AEU was eventually called off in 1985, TASS has added four craft unions to its craft sector since 1981. Part of the success of this strategy has been in the link between high technology skills and increasing occupational status:

> It is this belief that merger with TASS will place a small union on the right side in the new technology battles plus increase its members' chances of acquiring staff status that has been decisive (*Financial Times*, 29 May, 1985).

Clearly, secure jobs in the enterprise of the future will be those which have the attributes of skill to which unions such as TASS and EETPU have staked out a claim. However, organizational claims to represent a new technology-skilled membership may be at variance with members' feelings about what is happening to the skill content of their jobs, which concerns how it relates to their accumulated knowledge and the demands of the job itself. These union members will exercise their skills in the context of specific labour processes, subject to managerial control. The extent to which the acquisition of new technology skills results in deskilling and the degradation of work can only be tested by empirical study of specific labour processes.

Finally, new technology does not just reduce employment and change the nature of work in traditional industries, but also creates new industries with recruitment potential for the unions. Although these are not labour-intensive and are unlikely to replace the numbers lost elsewhere, strategically it is important for the unions to make inroads here, especially for those with new technology claims.

Conclusion

New technology is not neutral and has the potential vastly to expand managerial control over labour processes. There are high skill and low skill options in managerial choices over its introduction and clearly the extent to which the high skill, high productivity option is taken will largely be determined by the extent to which unions take initiatives in claiming new skills and obtaining recognition for them. Formal training programmes and plant-based involvement in job design are major considerations in this. Involvement in manpower planning at plant level may result in greater identification with the interests of the firm than has previously existed and employers' pressures for single site and single union agreements would indicate that this is a conscious strategy on their part. However, workers who benefit from secure employment and high technology skills do so in a general context in which there is an increasing polarization in the division of labour. Jobs are being casualized and new skills imposed without receiving recognition. In this chapter, union perceptions of the impact of new technology on members' jobs have been examined and strategies towards defending and claiming skills. These strategies have implications not just for the individual members but for unions as organizations with membership territories to defend. Whilst a declining base of fully employed members, combined with the breaking down of existing divisions within the labour force may open up sectional conflict over spheres of influence, it also poses its antithesis, co-operation and amalgamation. There can be little doubt that the introduction of new technology and attendant changes in occupational structure will see new alignments in the trade union movement in the coming years.

Notes

The author wishes to acknowledge the support of the ESRC for this research.

1. Interviews were conducted with national officers and research staff at national level and officers with regional responsibilities at local level in the Association of Professional, Executive, Clerical and Computer Staff (APEX), the Association of Scientific, Technical and Managerial Staffs (ASTMS), the Amalgamated Engineering Union (AEU), the Electrical, Electronic, Telecommunication and Plumbing Union (EETPU), the General, Municipal, Boilermakers' and Allied Trades' Union (GMB), the Technical, Administrative and Supervisory Staffs (TASS), the Transport and General Workers Union (TGWU) and the Union of Shop, Distributive and Allied Workers (USDAW).
2. I am grateful to Peter Armstrong of the Industrial Relations Research Unit for suggesting these terms to me.

3. The Industrial Training Boards (ITBs) were tripartite bodies with statutory powers to raise a training levy on all firms defined as coming within their scope. They set standards for training and were also involved in course design. As a result of the 1981 Review of the Employment and Training Act, 17 of the 23 ITBs were abolished, though two of the largest boards – engineering and construction – remain (see Rainbird and Grant, 1985, for details).

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Acker, J. *Doing Comparable Worth: Gender Class and Pay Equity*. Temple University Press, Philadelphia, 1989.

This is a very informative and readable account of the planning process for a comparable worth (equal pay for equal value) program in the state of Oregon from 1983 to 1987. The book achieves both practical and theoretical objectives: it explores comparable worth as a tangible strategy for increasing economic equality; and it contributes to a theoretical understanding of the inter-relationship between gender and class inequality. Based on a detailed examination of the wage policy processes of both the employer and the unions in the Oregon case, she demonstrates how technical issues are always political issues as well.

Feminist Review, (eds). *Waged Work: A Reader*. Virago, London, 1986.

An excellent overview and introduction to major debates on gender issues in employment and labour force restructuring, discussed in a British context. Articles review now-classic debates about the connnection between gender relations in employment and domestic labour. They also explore divisions within women's waged work by race, geography and class, and examine women's experience in unions, issues of technological change, privatisation and industrial piecework in the home.

Glucksmann, M. *Women Assemble: Women Workers and the New Industries in Interwar Britain*. Routledge, London, 1990.

The focus of this study is how and why assembly line jobs in light industry became women's work, and how that historical experience sheds light on theories of class and gender. Glucksman argues that gender restructuring was absolutely integral to the restructuring of British industry in the inter-War years, and that women's labour achieved a new centrality to capital in this period. She combines an analysis of changes in industrial work with shifts in the household economy, and calls for a focus on the 'organization of total social labour' as the means to understand the relations between men and women at home and in employment. The book is interesting and readable as well as theoretically ambitious.

Knights, D. & Willmott H., (eds)., *Labour Process Theory*. Macmillan, Basingstoke, 1990.

This is a theoretically oriented collection which reviews the current state of academic debates on the labour process and explores a number of emerging issues. These include the place of gender in work restructuring and skill formation, the character of the state and the nature of its participation in labour relations, the importance of dialectical analyses which explore conflict and political struggle and the implications of current theories of subjectivity for the study of the labour process.

Knights D. & Willmott H., (eds). *Gender and the Labour Process*. Gower, Brookfield, Vt, 1986.

This collection of papers has made an important contribution to breaking down the gender blindness of mainstream labour-process literature. The articles, by both men and women, cover professional, industrial and public-sector occupations in both historical and contemporary contexts, and offer a close-up look at the dynamics that create and recreate gendered job segregation. They engage, to varying extents, with debates within feminism about the relation between capitalist and patriarchal systems of gender subordination.

Kusterer, K.C. *Know-How on the Job: The Important Working Knowledge of 'Unskilled' Workers*. Westview Press, Boulder, Colo, 1978.

This is a very interesting, and much-overlooked, study of workers in two principal sites: production of paper cones for the fast food industry and bank workers. Kusterer is interested in the proposition that 'knowledge paradigms' exist on every job, not just among scientists and 'skilled' workers. Although now somewhat dated both theoretically and empirically, it remains a unique and insightful exploration of the character and complexity of knowledge and skills that workers routinely use to structure perception, interpret events and take appropriate action on the job. He concludes that there is 'no such thing as unskilled work'.

Rainbird, H. *Training Matters: Union Perspectives on Industrial Restructuring and Training*. Basil Blackwell, London, 1990.

This book examines British unions' responses to changes in training policies and institutions by the Thatcher Government. Based on research in the chemicals, construction, engineering and food processing industries, it gives a detailed analysis of unions' training policies after bipartite Industry Training Boards were dismantled and employers assumed sole responsibility for the provision of training. Rainbird links these changes to workplace reorganisation and industrial restructuring, always situating training within the broader industrial relations context.

Simon, R., Dippo, D. & Schenke, A. *Learning Work: A Critical Pedagogy of Work Education*. Bergin & Garvey, New York, 1991.

This is an innovative and thoughtful handbook primarily designed for educators working with youth or young adults in work–study programs. It sketches a range of widely applicable or adaptable teaching strategies for both classroom-based and worksite-based instruction based on principles of

learning through critical inquiry. Learning is seen not as a matter of acquisition, but as a process of 'production' in which technical know-how is integrated with knowledge about work processes and the social context of work. Working knowledge is seen as never neutral, but always part of a process of individual and collective identity formation. The book achieves a nice blend of reflection and practical suggestions.

Westwood, S. & Bhachu, P. *Enterprising Women: Ethincity, Economy and Gender Relations*. Routledge, London, 1988.

This collection provides a richly textured account of the complex interrelations among race, gender, work, culture and community in contemporary Britain. The articles stress the diversity of the lives of immigrant women from India, Pakistan, Cypress, China and elsewhere and the pervasive experience of institutional racism which divides them in time, space and daily labours.

Work and Occupations: An International Sociological Journal, vol. 17, no. 4, 1990.

This special theme issue is devoted to 'The meaning and measurement of skill'. It contains four articles which review recent debates, primarily US-based, about the nature of skill and its changing organisation in contemporary workplaces. Together, these articles provide a good introduction to a social rather than technical approach to conceptualising skill. See especially the article by Steinberg on comparable worth initiatives in which she talks about job evaluation and 'The politics of skill reconstruction'.

ACKNOWLEDGMENTS

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Reading 3 E. Appelbaum, 'Technology and the redesign of work in the insurance industry', in Barbara D. Wright et al. (eds), Women, Work and Technology, University of Michigan Press, Ann Arbor, 1987. Reproduced with permission of the University of Michigan Press.
Reading 4 reproduced with permission of Helen Rainbird, Industrial Relations Research Unit, University of Warwick.

ABOUT THE AUTHOR

Nancy Jackson is an Assistant Professor in the Faculty of Education at McGill University in Montreal, Quebec, where she teaches qualitative research methodology in the Department of Administration and Policy Studies and is the Associate Director of the Centre for Research on Instruction. Her academic background is in the social organisation of knowledge, and she received her PhD. in Educational Policy Studies from the University of British Columbia. Prior to joining the Faculty at McGill, she lived for many years in Vancouver, Canada, where she taught sociology of education and women's studies at the University of British Columbia and in the community colleges. She has also worked as a government researcher and consultant and as a community-based adult educator in a variety of initiatives related to women's education and labour force participation. Her current research is concerned with constructing a broader understanding of the nature of 'working knowledge' and a critical pedagogy of education for work.

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